

MEDICINE

Psychogenic Aspects of Hypertension

From a Lecture to the Post-Graduate Study Group
in Internal Medicine

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It has long been well known that emotions cause a varying effect on blood pressure. Relatively recently, however, the idea that emotional factors may be of etiological importance in hypertension has been gaining ground. In the following paragraphs I shall attempt to briefly present this idea. Let it be understood at the outset, however, that it is only essential hypertension that is being considered; all other varieties such as renal, cerebral, cardiovascular and endocrine will be disregarded.

Basically the patho-physiological change leading to hypertension is generally conceded to be a marked increase in peripheral vascular resistance which Ellis and Weiss have shown to be situated in the arteriolar bed. Further investigations have shown that there is no alteration in haemodynamics in essential hypertension so long as it is not decompensated;—that is, such things as pulmonary pressure, total blood volume, cardiac output, etc., remain normal as does the renal excretory function. However, renal circulatory function as measured by the clearance tests of Homer Smith et al, do show some change.

This increased peripheral resistance (or arteriolar constriction) may, theoretically be due to (a) organic narrowing;—this has not been found aside from the diffuse hyperplastic sclerosis which follows prolonged hypertension. (b) Reversible narrowing—that is, spasm—which may be brought about by (i) Humoral mechanisms; (ii) Neurogenic mechanisms.

There is not much argument now in regard to the humoral mechanism of renal hypertension—the question is whether renal changes are responsible for essential hypertension; and there is much evidence that this is so. However, Smithwick and Castleman, doing renal biopsies during sympathectomy for essential hypertension, did not find evidence of renal disease to account for the hypertension; further, Homer Smith, et al, showed that the renal circulatory change in hypertension was apparently dependent on constriction of the efferent glomerular Arteriole. They also showed that such changes were reversible by means of general vasodilatation, e.g., warmth—fever, etc.—

and could be reproduced in both hypertensives and normals by the use of adrenalin-like vaso-constrictors (Goldring and Chassis) which presumably operate via the autonomic nervous system or its end organs. Thus, the vaso-spasm, at least at one stage, is reversible.

With regard to the normal control of blood pressure, present physiological evidence shows that neurogenic influences, including the carotico-aortic depressor (Buffer) nerves, as well as renal mechanisms are operative. We must consider:

- (a) Local neurogenic influences.
- (b) General neurogenic influences.
- (c) The buffer nerves.
- (d) Renal mechanisms.

a) Local neurogenic influences: There is no evidence to show that local vaso-constrictor influences do more than control the blood supply locally, and, further, local influences do not affect a sufficient percent of the total peripheral resistance to cause elevation of the systemic blood pressure; unless, of course, the splanchnic bed be involved alone. If this were the explanation (since total blood volume is normal) circulatory shifts would cause increased blood flow in other parts and this has been shown not to occur; the circulatory dynamics remain normal.

b) Buffer nerves,—or the carotid and aortic depressor reflexes. The function of these reflexes in initiating compensator changes to sudden rises (or falls) of the blood pressure is well known. However, like all sensory receptors they exhibit the phenomenon of adaptation—i.e., they respond only to abrupt changes. If any elevation of blood pressure persists they lose their responsiveness to that degree of elevation. The possibility arises then of hypo-reactive buffer nerves as an explanation of hypertension. However, the carotid sinus reflex is hyper-reactive or normal in hypertensives, but certainly not hypo-reactive. Further, Thomas (quoted by Best and Taylor) sectioned these nerves in dogs and found only a mild rise of blood pressure; which rise was associated with an increased cardiac output.

c) Renal mechanisms. Sporadic reports have appeared of the finding of increased blood angiotonin in hypertensive cases,—but not at all consistently, nor apparently, in early cases (i.e., before renal damage ensues) (Best and Taylor). Further, although depressor extracts of normal kidneys show some effect in renal hypertension, they do

not exhibit this effect in essential hypertension (Stevens, Kotte, Smith, McQuire).

Thus, we are left with general neurogenic influences or psychogenic, or emotional,—or whatever word you wish to express the idea.

So far we have only a negative type of evidence. What of a more positive variety? Corcoran and Page in discussing this subject point out that in order to demonstrate the psychogenesis of hypertension it must be shown that

a) Hypertension can arise, *de novo*, as a sequence of a characteristic mental pattern, and

b) Hypertension can be abolished by appropriate psychotherapy. Much has been done along these lines (see Menninger, Rennie, Alexander, Saul, Robinson), but the best study is probably that of Flanders Dunbar which confirms, and has been confirmed by, the work of others. Briefly, she and her associates set out to find the part played by emotions in various disease groups. She chose fracture cases as a baseline of measurement since they seemed pretty well 100% physical in origin. In passing it may be noted that the "baseline" proved to be the "jackpot" in that many fractures could be linked up with a preceding intrinsic or extrinsic emotional crisis which rendered the subject "accident prone." She did find, however, in personality studies on routine hospital admissions, that she could delineate a "hypertensive personality" as follows in summary. But first let us consider what she describes as predisposing factors.

1) **Heredity:** Fifty per cent gave a history of cardio-vascular disease in the family. But—98% (and on the other 2% information was not available) showed exposure at a relatively early age to cardio-vascular disease or sudden death in the family or close friends. It may be then that the usually accepted hereditary factors are more pseudo-hereditary.

2) **Previous illness record:** On statistical analysis she showed that the past illnesses were "several times what would be expected in the general population."

The Hypertensive Personality *per se* (Dunbar).

1) **Socially:** These people were "socially shy" except under alcohol, to which they were more addicted than other studied groups (also to tobacco). Other prominent features were "constant feeling of being judged," "fear of failure" in what was undertaken, "sensitive to criticism."

2) **Sexually:** There was early conflict over masturbation with a tendency (not infrequently overt) to sexual ambivalence. They were sexually unsure with compulsive promiscuity, premature ejaculation, etc.

3) **Parental Attitudes:** In general these were of rebellion against their parents—"they protected

me too much" or "wanted to live my life for me"—and this rebellion was in conflict with the feeling that "parents, or society as a parent substitute, should take care of them if things went wrong."

4) **General Behaviour:** The "surface personality" showed "considerable self-control and reserve" overlaying "marked emotional reactivity." "I try not to get angry," "I try to reason—not fight." There were also perfectionistic compulsions, especially in regard to their work, and this, plus their fear of failure, led to a choice of life work inferior to their capabilities.

5) **Neurotic Traits:** a) Past—These were noteworthy for their absence and were present in only 24% in the form of nail-biting, temper tantrums, and nightmares. b) Present—Their perfectionistic pre-occupation, plus their fear of failure, led to periods of depression punctuated by outbursts of aggression. That is a conflict between submission to authority and self-assertion.

In summary then Dunbar found hypertensives to show a lifelong conflict in the sphere of authority—the difficulty being mainly fear of criticism and (or) failure. (They resent criticism as unjust but don't express this resentment. "I always have to give in but afterward I am furious"). They recognize their ability but their fear of failure leads them to choose a lesser job—which gives rise to feelings of humiliation because they feel they were forced into the work by lack of understanding parents or other authority and thus tend to fail in the chosen occupation.

Briefly put, they show a "chronic rage reaction—more or less completely repressed" (Dunbar) or "chronic resentment" (Rennie).

As Page and Corcoran put it, "Human emotions are a dynamo, the current of which may be exteriorized into the motors of conscious action or into the condensers of nerves, muscles, glands and other viscera. When the dynamo runs too fast or higher force puts a brake on the motors, then the condensers become super-charged."

The work of Dunbar especially, and also of Menninger, Saul, Alexander, etc., seems to at least suggest that the first of Corcoran and Pages prerequisites has been fulfilled. The second of these has also been shown by Menninger, Alexander, Weiss and English, and others, but in insufficient numbers in view of the well-known variability of the disease, to warrant drawing any conclusions. This is not surprising in view of the fact, as Corcoran and Page point out, that those cases sent for psychotherapy are usually those in which the neurotic element is more obvious (this does not apply to Dunbar's work), and further, as Menninger states, no one psychiatrist has the time, in a lifetime, to treat a sufficient number of cases on which to base definite conclusions, but the cumulative experience of many psychiatrists is at

least suggestive. What is needed is a well-controlled group psychotherapeutic study of a few thousand hypertensives.

In brief, then, the concept of the psychogenic school is that intrinsic personality conflicts may initiate a process (a widespread vaso-motor neurosis) on a physiological basis (as yet not clearly defined) which may (possibly only in hereditarily predisposed persons) lead ultimately to hypertension which results in damage to various organs. Prominent amongst these organs is the kidney (possibly because of the sudden step down in size in the renal vessels, i.e., from aortic to arteriolar caliber) which in turn adds a humoral factor to the maintenance of the elevated blood pressure and so a vicious circle establishes the hypertension. Goldring and Chassis suggest from their studies that the elevation of blood pressure is the (at present) first detectable sign of a physiological disturbance which has existed for some time and this would agree with the above outlined concept.

Further suggestive evidence is drawn from a consideration of the symptoms commonly attributed to hypertension. These are divisible into two groups:

- (1) Those of decompensated hypertension—cardiac—renal—cerebral, etc.
- (2) Those of compensated hypertension, such as headache, giddiness, fatigue, Disordered Action of the Heart, tension, irritability, etc.

It is, I believe, significant that the symptoms of this second group can be regularly relieved by appropriate psychotherapy. Further, their severity bears no relation to the height of the blood pressure and usually an adequate psychogenesis for the symptom can be demonstrated (Weiss & English; Page & Corcoran).

Have these conceptions any practical import? I believe, in common with most, that they have, at least in regard to therapy. But first I think it is profitable to decide just what are our aims in the therapy of any given case.

(1) In the decompensated case we must aim treatment at restoring compensation.

(2) Otherwise there are three possible aims: (a) Relief of symptoms. (b) Lowering of blood pressure. (c) Prolonging of life, and the success of any treatment advocated must be measured against its aims. For example, it seems to me that to resort to removing the patient from his sympathetic nervous system for relief of symptoms is a confession of inability to manage the case; but to resort to sympathectomy in an attempt to prolong life in a case showing progressive organ damage is entirely justifiable. However, it is not my purpose, here, to attempt to evaluate therapy, but only to suggest that it must be evaluated in terms of its aims.

Since, according to the concept I have tried to present hypertension is a psychosomatic disease, I believe it would be worth while to consider Cobb's suggestion regarding the etiological nature of any disease; viz: that there are at least four etiological factors, two or more of which may be operative in any disease. These are chemogenic, histogenic, genogenic and psychogenic, and no disease is entirely one or another. Fractures, already mentioned, are a good example of an apparently entirely histogenic disease which we now know also has psychogenic factors. Idiopathic epilepsy has, of course, genogenic, chemogenic and psychogenic factors. This is fundamental in the idea of psychosomatic medicine and leads to the treatment of the patient, and not only of the patient's disease.

The application of the above concepts to the treatment of hypertension yields the following:

(1) Serious consideration of the patient as a whole in his life situation. Let him talk out his repressions and resentments (discharge his condensers) to a kindly, sympathetic yet firm and unemotional audience.

(2) Frank discussion of the nature of hypertension with the patient and the relation of his symptoms to his hypertension.

(3) The adjuvant use or restriction of work, play, rest, leisure, alcohol, tobacco, sex, etc., and various non and pseudo-specific drugs as indicated. Obesity should also be managed, but it is interesting to note that this obesity is likely part of the hypertensive personality (oral gratification of resentment).

This then is the concept of the psychogenic nature of essential hypertension, but please note that established essential hypertension, even according to this concept is psychogenic, chemogenic (Humoral), histogenic (organ damage), and genogenic (hereditary).

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Virus Epidemic — 1947

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During the past fifty years in civilized countries, perennial devastating epidemics have almost disappeared. The exanthemata have become rare and attenuated; widespread outbreaks due to pyogenic organisms are infrequent, readily recognized and effectively treated. Unfortunately we cannot be so complacent about virus infections; indeed our position appears to be becoming worse. New epidemics are appearing the world over. Here in Manitoba the situation would appear to be more virulent than in most parts of the world. In the period from 1919 to 1923 we had a very high incidence of encephalitis lethargica which carried a high mortality and left an appalling legacy of Parkinsonism. In 1918-19 we had at least our share of the most malignant influenza pandemic of all time. In 1941 we had the distinction of being the centre of the Western equine epidemic co-incident with a large poliomyelitis attack. Besides these clear cut outbreaks we have had regular epidemics and sporadic cases of influenza, colds, poliomyelitis and other virus infections.

The memory of these epidemics provides food for serious thought and sombre speculation. Evidently new viruses, or old viruses with enhanced virulence, can run riot at any time, and no one can predict when and how they will strike. We are almost completely without facilities for their diagnosis and no specific treatment has been discovered for any one of them. Each one takes us by surprise and finds us completely helpless. Fortunately in the past the morbidity has not been overwhelming and the total mortality has not been great. This is entirely a matter of chance and certainly not related to any effort on our part. Picture what could happen if the next virus that goes berserk is slightly more virulent than any of those that have so far surprised us. It requires very little imagination to create a state of apprehension not less than that associated with the future of atomic energy. In view of these facts and these possibilities it is not an exaggeration to say that the study of viruses is the most important medical problem of our day.

Viruses do not plague us only in epidemics. It is safe to say that at least half of the acute respiratory infections that one sees in practice are not of pyogenic origin and therefore not amenable to treatment by modern antibiotics. In the case of none of them are we in a position to make a precise diagnosis or to provide useful treatment. The helplessness of the profession and of health departments to cope with virus epidemics has been well illustrated in the past three months in Winnipeg.

Among the many febrile illnesses of recent months there has no doubt been some poliomyelitis and some encephalitis, but there has also been a virus infection which has clinical manifestation quite distinct from these. Early in July, 1947, this acute mildly febrile illness made its appearance. People were inclined to call it "Flu" if it occurred in adults and "polio" if it was in children. Latterly some have been suggesting the diagnosis of encephalitis.

After a short experience with this epidemic among nurses in the Winnipeg General Hospital and patients at Deer Lodge Hospital, it became evident that we were dealing with something apparently new. Pupil nurses are excellent material for the study of epidemics. They come in contact with many sick people and they are fairly susceptible to infection because many have come from rural places. For that reason they furnish a good index to current infections. Also, when ill, the course of their disease can be closely observed and all necessary examinations may be done without inconvenience or expense.

Before we attempt to say what the epidemic may be, perhaps we should describe some of the cases.

Case I.—Miss McP. Age 19. Pupil nurse.

History

1st day (August 20)—While on duty on B flat noticed headache and stiffness of neck on stooping over bed. Continued work and went to movie in evening. Slept well.

2nd to 5th day (August 21-24)—Continued work on wards but slept during all her hours off (which was unusual).

Chief complaints were: **Frontal and occipital headache;** worse in morning; not very severe; throbbing at times. **Pain in neck;** posterior; worse on stooping. Faint, dizzy, squeamish feeling. Thinks she had no fever.

6th day (August 25)—Developed intermittent pain in lumbar and lower dorsal region. Headache a little worse and pounding. Temperature 99.4 in evening. Admitted to Infirmary. Examination negative except for slight pain in neck and spine on full flexion.

7th day (August 26)—Headache worse all day. Neck stiff. At 5 p.m. suddenly developed nausea and vomiting and headache became much worse. Temperature rose to 100.5.

8th day (August 27)—Temperature up to 102 in a.m. and then became normal and remained so. Vomiting continued till evening. Nausea all day. Very apathetic and listless.

9th day (August 28)—Very drowsy all day. Frontal headache and stiff neck persist. Back a little painful.

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10th to 13th day (August 29-September 1)—Gradually improved in all respects.

14th day (September 2)—Feeling quite well when lying in bed. On getting up is weak and dizzy.

Examination

All examinations were negative except for slight limitation in flexion of neck and spine and slight tenderness in posterior neck, trapezius and erector and spinae muscles.

All special examinations, including full blood investigation and lumbar puncture (on 7th day) were negative.

Case II.—Mr. C. (Deer Lodge Hospital).

1st day (August 20)—Gradually developed severe throbbing frontal headache, accompanied by retro-ocular pain. Had dizziness on lifting head from pillow. After a few hours noticed stiffness in calf and back muscles and soon after had chilliness but no actual rigor.

2nd day (August 21)—Symptoms very much improved. Physical examination showed some stiffness of neck and diffuse tenderness of back and calf muscles. High point in temperature was 100.5. C.S.F. 10 cells (6 polymorphs and 4 mononuclears). Provisional diagnosis of poliomyelitis was made and Kenny regimen commenced and continued for five days.

3rd to 15th days (August 22-September 3)—Felt perfectly well except for some stiffness in back muscles which he attributed to lying in bed.

16th day (September 4)—Suddenly developed an attack in all respects similar to the first except that temperature rose to 102.8. Spinal puncture: 80 cells; 34 polys; 37 lymphocytes; protein 62. Leukocyte count: 16,000; 78% neutrophiles; 22 lymphocytes.

20th day (September 8)—Has no symptoms except some weakness and dizziness on getting up. No convincing neurological signs were found throughout the illness.

These two cases are fairly typical. Hundreds of similar cases occurred throughout Manitoba and every practitioner has had experience with many. We were able to make a detailed day-to-day study of 20 cases seen in hospital. From these a composite clinical picture that has fairly definite features may be constructed.

Onset

Usually this was rather abrupt but not violent.

Headache. This was the presenting symptom in nearly every case. It was most frequently frontal but occasionally not localized. In half the cases it was throbbing, relieved by lying down, and associated with some dizziness.

Muscle pain or stiffness was present at onset in nearly all cases. In three-quarters of the cases

it was localized to the neck and dorsal spine; occasionally it was in the limbs or lumbar region. It was rarely severe and usually disappeared on rest.

Definite dizziness was complained of in about one-quarter of the cases. It was never severe and only appeared on sitting up. It was not associated with other vestibular signs or symptoms.

Fever. On the first day the fever was usually minimal—from 99.5 to 100.5. This persisted for a day or so.

Apathy and listlessness were very common. This never amounted to lethargy though the common tendency was to sleep more than usual.

Course of First Attack

These symptoms of onset persisted for a few days to two weeks. They were not severe and about half of the patients continued up and about. The others were incapacitated for a day or two at first and then returned to work.

Recurrence or Second Attack

This was the most characteristic feature. It occurred in 15 of the patients who were closely followed. The time of recurrence varied from the fifth to the thirteenth day after the original attack. This second attack was similar to but more violent than the first. The headache was worse and nausea and vomiting were much more common and more severe. The temperature was usually higher—commonly going to 103 for a day. Somnolence and listlessness were more marked.

Usually the second attack lasted only a day or two, leaving weakness, muscle soreness and stiff spinal muscles for about a week.

Three patients had a tertiary but milder attack several days after the second.

It is likely that the secondary attack appeared more common to us than it actually was in the whole epidemic. There is no doubt that many people who had only the mild primary were not seen by medical men.

Physical Findings

The universal finding was tenderness and stiffness of the muscles involved. In nurses tenderness in the trapezius was especially common. There were no consistent or significant changes in reflexes. There was occasional question over up going toe. The only abnormality was absent abdominals found in five cases; this persisted for a few days.

Lumbar Puncture

Lumbar puncture was done on twelve of this series—in most cases more than once. Three had a cell count over 10 (80, 172, 150) and all of these were in the secondary rise. Of these three, two had had a negative puncture during the first attack. The cells were nearly all lymphocytes.

Sedimentation Rate

During the first attack this was nearly always within normal limits. In the secondary attack it often rose to about 50 in one hour in a 200 mm. tube.

Leukocyte Count

This was always normal in the primary attack. Three patients at the acute stage of the secondary attack had leukocytes between 12,000 and 16,000 which were polymorph-nuclear. This suggested the possibility of a secondary pyogenic complication. No other evidence of this was found. The leukocytosis disappeared quickly and the cases were in other respects identical with those in whom the blood count was normal.

Complications

All these patients have recovered without paralysis or other disability that can be detected. In one, some muscle pain still persisted after six weeks and in one there was marked rigidity of the spine for two weeks.

One patient developed much herpes on both sides of the face, eyelids and forehead; one had superficial thrombophlebitis of one leg and one got bilateral orchitis. Each one of these complications came at the time of the secondary attack.

Diagnosis

In default of a better name this epidemic has been called "virus epidemic—1947." There seems little doubt that this epidemic was due to a virus. It had the general characteristics of such outbreaks; that is, it was very widespread and showed a marked variability in clinical manifestations from case to case. In a vast majority of cases there was no leukocytosis and the pulse was relatively slow. Also the sedimentation rate was low in comparison to the constitutional reaction. The complications which we saw, orchitis and herpes, and which other practitioners also encountered, suggest virus origin.

The clinical course had no resemblance whatever to epidemics that have proven to be due to influenza A or influenza B, and none of these cases resemble those that were proven to be due to the Western equine virus in 1941. The evidence suggests that the virus was neurotropic in its tendencies, especially in the second attack. The violent throbbing headache, apathy, severe muscle tenderness, occasional pleocytosis and the very definite absence of abdominal reflexes in some cases, all suggest at least a superficial central nervous system invasion.

There is no doubt that much confusion with anterior polio-myelitis arose; this was inevitable. At the onset these cases could not be differentiated from polio-myelitis, especially if an abnormal number of cells were found in the spinal fluid. The differentiation could only be made by subse-

quent developments. In doubtful cases practitioners quite properly erred on the side of caution and made a tentative diagnosis of "polio" in order to be sure that disabling paralysis should not be overlooked. Over diagnosis of polio-myelitis may also be encouraged by the prevailing opinion about "muscle spasm." Since the Kenny regimen became fashionable, the search for muscle spasm has occupied the attention of those looking for early cases of polio-myelitis. The discovery of such spasm has come to be almost analogous to the finding of "pre paralytic polio." It seems probable that this tendency has gone too far and it is not sufficiently realized that muscle spasm can be discovered in any febrile illness associated with localized muscle pain. The distinction between true polio and the new epidemic has been particularly difficult because there have unquestionably been many cases of true anterior polio-myelitis during the same period.

The significance of an abnormal number of cells in the spinal fluid is also difficult to assess. Too often it is accepted as a confirmation of polio-myelitis if other clinical findings suggest such a diagnosis. Actually we are not in a position to know exactly how often this occurs in other acute viral infections. Even in influenza persistent puncturing might disclose some meningeal reaction.

Confusion with Western equine has been frequent and also inevitable, since there have been some definite cases of this infection throughout the Province during the summer. Two cases have died in the King Edward Hospital and the autopsy findings were those commonly found in 1941. Also two typical cases in infants in the Children's Hospital have been reported to have developed positive complement fixation. We have seen some cases which were clinically typical of which the following is an example.

Mr. A. H. Age 56. Carpenter in small rural community.

1st day (August 24)—At 5 p.m. suddenly became dizzy and had a dull bilateral frontal headache. Soon afterwards became nauseated but did not vomit.

2nd-5th days (August 25-28)—Confined to bed. Headache continued moderately severe, but in spite of this he slept more than normal. During this period he developed definite double vision on looking to the right. Had a dull, aching pain throughout the mid dorsal region. Temperature was not recorded.

5th day (August 28)—Admitted to Winnipeg General Hospital. Still complained of moderately severe headache. Temperature 100, pulse 98, respiration 20. On examination he was obviously very drowsy and fell off to sleep while being questioned. Abdominals absent in the lower quadrants. Nystagmus on looking to the left. No

muscle tenderness. Lumbar puncture: total protein 60 mgms.; 29 cells (lymphocytes). Leukocyte count: 17,200.

12th day (September 4)—Much improved. Lumbar puncture: 136 cells, all lymphocytes.

14th day (September 6)—No complaints. Up and about the ward. Discharged.

This case and some others that were seen, resembled a moderately severe attack of Western equine encephalitis as seen in 1941. It is contrasted to the present epidemic in the following respects:

There was no mild primary attack.

The onset was sudden and central nervous involvement was soon manifested by insistent headache, lethargia, diplopia, nystagmus, pleocytosis and absent abdominal reflexes.

There was no muscle tenderness or spasm.

Complete recovery took place within two weeks.

In a general way it can be said that the lesser attack in this epidemic at first simulated and was often mistaken for polio-myelitis, while the second-

ary attack often resembled Western equine encephalitis.

Future of Virus Infection

There is no way to predict what the future of virus infections will be. Judging from past experience they are a potential menace of the first order. Our facilities in Canada for recognizing them are negligible. Our protection against them is no better than that against smallpox in the days of Sydenham, when all epidemics were accepted as inevitable visitations of the Almighty. With a properly organized virus laboratory it is possible to perform serological tests which can establish the diagnosis in Influenza A and B, Western, Eastern and St. Louis encephalitis, and also chorio-meningitis. The operation of such a laboratory might best be undertaken by the Federal Department of Health. From such a centre a general supervision of virus diseases in Canada could be maintained. Such a centre could also conduct research which would in time increase our sparse knowledge of these infections and in time prophylactic measures could be devised.

Observations on the Epidemic of Virus Disease

As Noted at the Children's Hospital
S. A. Boyd, M.D.

It is my assignment, this evening, to report to you some observations made upon those children who have been cared for in the Children's Hospital as a result of this epidemic of virus infections.

When it was realized that we would likely be required to accommodate a number of children and that the majority would be afflicted with acute poliomyelitis, a "Polio" Committee was set up with a view to shortening the hospital stay, facilitating diagnosis and suggesting therapy to prevent paralysis and to preserve life. For obvious reasons a critical analysis of the records cannot yet be made, and this report is necessarily a generalization attempting to view the picture from the diagnostic aspect.

One hundred and ninety-four cases are for the present classified as follows: Acute Spinal Poliomyelitis, evidenced by persisting paralysis, 21. Evidenced by transient paresis and/or spasm of muscles, 142. Acute Poliomyelitis with evidence of Bulbar Involvement, 6. Acute Encephalitis, 6. Probable Virus Infection, not likely Poliomyelitis, 19.

In our community—a proven hotbed of virus infection—it is deplorable that there is a lack of laboratory facilities for virus identification. It is to be hoped that in time this will be remedied. Samples of blood have been taken from most of

these cases for future study. Blood samples from five patients considered to have definite poliomyelitis were examined in a laboratory in Montana and these were reported negative for the virus of Western Equine Encephalitis. In three patients clinically diagnosed encephalitis, the blood specimens examined in Regina were reported in two as positive for and in the other as doubtful but suspicious of the virus of Western Equine Encephalitis.

The Diagnosis of Acute Poliomyelitis

The acceptable criteria for the diagnosis of acute poliomyelitis are still very confusing and I do not profess to clarify them. It seems impossible to draw a line upon which all will agree.

The chief symptoms of which these children complained were: Headache, usually frontal and often occipital, associated with fever, malaise, stiffness and pain in the neck and back and soreness in the muscles of their extremities. The temperature rarely exceeded 102 degrees. Not infrequently the onset was heralded by several days of mild fever with headache and general discomfort, followed by an interval of three or four days of apparent health, and this in turn followed by a relapse in which the fever returned, the headache recurred with increased severity, and soreness developed in the neck, back and extremities. Objectively, when persisting paralysis was absent we based our diagnosis of acute poliomyelitis on the occurrence of temporary paresis, and of spasm, or tenderness associated with spasm, in various muscle groups when they were

palpated in positions which placed them on stretch. Definite evidence of persisting paralysis of muscles in the extremities has been observed in 21 cases. Spinal puncture was done in all cases. The white cell count of the fluid was usually between 10 and 300 and in a number of instances between 300 and 1,000.

Diagnosis of Bulbar Poliomyelitis

We have had six cases showing evidence of cranial nerve involvement. In two of these there was paresis of the palate which fortunately subsided in 24 hours. In bulbar poliomyelitis the threat to life lies in involvement of the 9th, 10th, 11th and 12th nerves, especially the 10th. Two of the six cases (boys of 11 and 13) died. One, a boy of 5, recovered and the other is, we hope, recovering. Because of its tragic possibilities it is extremely important to recognize impending or developing paralysis of these nerves. Symptomatically this involvement is recognized by (1) Difficulty in swallowing solids or liquids; (2) regurgitation of ingesta from the oesophagus and through the nose; (3) cough due to failure of the larynx to close. Objectively the voice develops a nasal twang or becomes hoarse, palatal movements become asymmetrical and there is pooling of saliva in the pharynx. These have been the findings in our cases, and obstruction of the upper airway has been a major therapeutic problem. Involvement of the bulb threatens the respiratory and circulatory centres and paves the way for pulmonary oedema. Apprehension and restlessness are signs of grave import.

Diagnosis of Encephalitis

Six cases in this group were diagnosed encephalitis. Of these four were infants under five months and one under 16 months. The predominating history in each case was of an illness sudden in onset and associated with high fever and convulsions. The spinal fluid cell count was under 200 in four cases and 12,000 in one. All of these patients have recovered, although two of them were amblyopic for a week after the cessation of convulsions. The fundi were negative and vision is now apparently normal. The sixth case was a girl of 12 years who suddenly took ill with fever and generalized headache, and soon afterwards became irrational. She ran a persistent fever of 103 to 105 degrees, associated with a low white cell count and with a spinal fluid pleocytosis of 70 to 600 cells on periodic examinations. During the course of her illness she varied from being irrational to a state of lethargy. There was no evidence of muscle spasm. She was discharged from hospital improved. Such striking disturbance of the sensorium is unusual in acute poliomyelitis.

These observations concern only the In Patients. During the latter part of July and the month of August 150 children were referred by private doctors to the Out Patient Department for diagnostic spinal punctures. An additional number were examined as Staff Patients. None of these were admitted to hospital and therefore do not come under this survey. These facts, however, are evidence that this epidemic of virus infection has undoubtedly attacked a very large number of children and probably in many varying degrees.

Medico-Historical

Erasistratus Performs a Cure

For Antiochus, it appears, had fallen passionately in love with Stratonice, the young queen, who had already made Seleucus the father of a son. He struggled very hard with the beginning of this passion, and at last, resolving with himself that his desires were wholly unlawful, his malady past all cure, and his powers of reason too feeble to act, he determined on death, and thought to bring his life slowly to extinction by neglecting his person and refusing nourishment, under the pretence of being ill. Erasistratus, the physician who attended him, quickly perceived that love was his distemper, but the difficulty was to discover the object. He therefore waited continually in his chamber, and when any of the beauties of the court made their visit to the sick prince, he observed the emotions and alterations in the countenance of Antiochus, and watched for the

changes which he knew to be indicative of the inward passions and inclinations of the soul. He took notice that the presence of other women produced no effect upon him; but when Stratonice came, as she often did, alone, or in company with Seleucus, to see him, he observed in him all Sappho's famous symptoms,—his voice faltered, his face flushed up, his eyes glanced stealthily, a sudden sweat broke out on his skin, the beatings of his heart were irregular and violent, and, unable to support the excess of passion, he would sink into a state of faintness, prostration, and pallor.

Erasistratus, reasoning upon these symptoms, and, upon the probabilities of things, considering that the king's son would hardly, if the object of his passion had been any other, have persisted to death rather than reveal it, felt, however, the difficulty of making a discovery of this nature to Seleucus. But, trusting to the tenderness of

Seleucus for the young man, he put on all the assurances he could, and at last, on some opportunity, spoke out and told him the malady was love, a love impossible to gratify or relieve. The king was extremely surprised, and asked, "Why impossible to relieve?" "The fact is," replied Erasistratus, "he is in love with my wife." "How," said Seleucus, "and will our friend Erasistratus refuse to bestow his wife upon my son and only successor, when there is no other way to save his life?" "You," replied Erasistratus, "who are his father, would not do so, if he were in love with Stratonice." "Ah, my friend," answered Seleucus, "would to heaven any means, human or divine, could but convert his present passion to that; it would be well for me to part not only with Stratonice, but with my empire to save Antiochus." This he said with the greatest passion, shedding tears as he spoke; upon which Erasistratus, taking him by the hand, replied, "In that case, you have

no need of Erasistratus; for you, who are the husband, the father, and the king, are the proper physician for your own family." Seleucus, accordingly, summoning a general assembly of his people, declared to them, that he had resolved to make Antiochus king, and Stratonice queen, of all the provinces of Upper Asia, uniting them in marriage; telling them that he thought he had sufficient power over the prince's will that he should find in him no repugnance to obey his commands; and for Stratonice, he hoped all his friends would endeavor to make her sensible, if she should manifest any reluctance to such a marriage, that she ought to esteem those things just and honorable which had been determined upon by the king as necessary to the general good. In this manner, we are told, was brought about the marriage of Antiochus and Stratonice.

Plutarch "Life of Demetrius."

Book Review

The Fundamentals of Psychiatry

A doctor would not abstain from opening an abscess merely because he did not hold a higher surgical qualification. It is recognized that all minor and many semi-major surgical procedures are within the scope of every practitioner, just as it is recognized that there is a field of major surgery with which only a few are familiar. Now, just as there is a minor and a major surgery so is there a minor and major psychiatry. Again, as in surgery, minor cases far outnumber the major ones. Yet, because of an admitted inability to cope with the major conditions, there is a tendency to neglect the minor ones. It is as if a practitioner were to neglect an abscess because he lacked the training of a Lister.

This ignorance of, or indifference to, psychiatric problems is due to two causes. First, there has been until recently a failure to recognize the fact that the body is but the tool of the mind. The second reason lies at the door of psychiatry itself. A quarter of a century ago Solomon said that psychiatry was the Cinderella of medicine. This is scarcely true. Cinderella, one could imagine, spoke a homely language and made friendship easy. Psychiatry, especially at that time, was, on the other hand, a very sophisticated maiden, who, having invented a jargon of her own, snobbishly refused to associate with those who were unfamiliar with her outlandish tongue. I recall periphrasis being defined as "a circumlocutory way of expressing obnoxious ideas lost in verbal profundity." That might, for many, stand as a definition of psychiatry.

But within this circumvallation of obscurantism was a seed so rich in value and so great in power that it burst its way through its artificial constrictions. Partly this was brought about by lay and professional writers who, by articles in popular magazines, by books and by plays aroused the interest of laymen. Now every Hollywood producer has his psychological drama and every soap opera its psychiatrist. The war, too, played a tremendous part in awakening consciousness to the importance of understanding why men behave as they do and of the critical role played by the emotions in the drama of everyone's life, well or sick. In addition, doctors in every sphere of medical activity began to see in psychiatry a primary subject without which neither medicine nor surgery is complete. Indeed, to practice without it is similar to attempting a landscape with a palette limited to two of the primary colors.

As a result of this arousing interest, medical publishers began to issue books on the subject, books which were written not for the inner circle of initiates but for those who wished to be initiated. About a year ago Lippincott published a small volume called "Everyday Psychiatry"—a most helpful book—and now they bring out a new edition of Strecker's "Fundamentals of Psychiatry." Any book that has gone through four editions and several reprintings in five years must have been found very useful. It is easily written. It is written to instruct the uninstructed. It uses language which anyone can understand and there is a glossary of those technical terms which must be used. Etiology, methods of examination, the

nature and characteristics of the organic, toxic and functional psychoses, psychosomatic medicine and other pertinent matters are given sufficiently full consideration. The merits of the book far outweigh its faults. There are 300 pages of text. In this fourth edition there has been a complete revision. Twenty-one diagrammatic illustrations make understanding easier. In every practice there are many patients who cannot be helped by the knife or by drugs but only by an understanding of their personalities. In every case cure can be hastened by the application of psychological principles. If one would do his best by those who seek healing at his hands he must be familiar with the physiology and pathology of the mind as well as of the body. No simpler book of instruction can be found than Strecker's "Fundamentals of Psychiatry." The only doctors who should not buy it are those who have already bought it.

Fundamentals of Psychiatry. By Edward A. Strecker, M.D., Sc.D., LL.D., Litt.D., F.A.C.P. Fourth Edition. J. B. Lippincott Company, Montreal. \$5.00.

Interpreting the Language of Disease

Signs and symptoms are the language of disease. Before one can proceed to treatment he must understand the why and wherefore of the patient's complaints. Each sign and every symptom must be analyzed and then interpreted. This is diagnosis. Several months ago Lippincott published a small book called "The Analysis and Interpretation of Symptoms." Being a good and useful book the edition was soon exhausted. Instead of issuing a second edition a completely new book was published. This is titled "Signs and Symptoms, Their Clinical Interpretation." It deals very fully with 30 common symptoms and is under the editorship of Cyril M. McBryde. The editor contributes an introductory chapter in which he discusses the essentials of symptom analysis and interpretation. Then comes a series of articles on Pain. First there is a discussion on pain per se its mechanisms, its causes, its manifestations, its anatomy and physiology and psychology. H. G. Wolff deals with Headache, its mechanisms and

(Continued on Page 579)

OBITUARIES

Dr. H. W. Riley

A veteran of World War II, in which he distinguished himself, Dr. H. William Riley, 222 Waverley Street, Winnipeg, died on August 26, aged 31.

Graduating in medicine from the University of Manitoba in 1939, he spent a year in the Winnipeg General Hospital as resident in medicine. In 1940 he enlisted in the R.C.A.F. and served in the Shetland Islands, Ceylon and Burma, attaining the rank of Squadron Leader. On his return he took a course in tropical medicine at the Walter Reed Hospital in Washington, D.C., spent a few months at the Rheumatic Fever Hospital in Calgary, and from 1945 had served in Deer Lodge Hospital and had been a member of the Winnipeg Clinic.

He is survived by his wife, a young son and daughter, his parents and a sister.

As a young man of great promise and pleasing personality he will be greatly missed.

Alexander Thomas Cameron

Alexander Thomas Cameron, Professor of Biochemistry in Manitoba University since the close of World War I, died in the Winnipeg General Hospital on Sept. 25, after a long illness.

He was born in London, England, and was educated at Edinburgh University, where he received his M.A., B.Sc. and D.Sc. He also received

the 1851 Exhibition Science Research scholarship, studying at University College, London, under Sir William Ramsay. Later he studied at the Polytechnik Institute, Karlsruhe, Germany.

In 1909 he came to Winnipeg as lecturer in physiology and biochemistry assisting the late Professor Swale Vincent. During the war of 1914-18 he served overseas for four years with the R.A.M.C. On his return to Winnipeg in 1919 he became professor of biochemistry and was soon recognized as one of the foremost authorities in that subject. In 1928 he wrote a Textbook of Biochemistry; in 1930 in collaboration with Dr. Frank D. White he wrote Practical Biochemistry; in 1933 with Dr. C. R. Gilmour—The Biochemistry of Medicine, and in the same year Recent Advances in Endocrinology. The latter work has gone through six editions.

His time was not wholly spent in teaching or writing. He did much research work in marine biology and became Chairman of the Fisheries Board of Canada. For his services in this connection he was recently honored by the King to receive the C.M.G. He was an active member of the Scientific Club of Winnipeg; fellow of the Royal Society of Canada; fellow of the Royal Institute of Chemistry, Great Britain; fellow of the Chemical Institute of Canada, and a member of the Senate of the University of Manitoba.

He is survived by his widow, a daughter of the late C. N. Bell, LL.D.; a son, Alistair; a daughter, Janet, and one brother in Montreal.

ANAESTHESIOLOGY

Edited by D. G. Revell, M.D., Anaesthetist, Children's Hospital, Winnipeg

Emergencies Arising During the Administration of the Anaesthetic

F. A. Walton, M.D., Anaesthetist Winnipeg General Hospital

In the days when chloroform was widely used serious emergencies such as ventricular fibrillation and cardiac standstill were a more common occurrence. Emergencies in the operating room ending in a fatality are rare today, in the hands of qualified anaesthetists, and the case that does die is usually found to have some very adequate cause of death at autopsy, such as pulmonary embolism, massive haemorrhage, etc. "Emergencies" in a broader sense are quite common, however, and are usually dealt with by the anaesthetist without the rest of the operating room personnel being aware that they exist.

I would like to say a little about prevention first. The proper preparation of the patient can do so much to prevent emergencies arising. Every patient undergoing major surgery should be fully investigated, of course, and blood grouping and matching done if indicated. It is very desirable that the anaesthetist see the patient beforehand also. Proper premedication, especially adequate doses of atropine at least one hour pre-operatively, is important to limit secretions and to depress the vagal reflexes. If the premedication, including morphine, cannot be given by hypodermic due to lack of time, then it can be given safely intravenously in the usual doses as long as at least one minute is taken in the administration.

I must also mention the great importance of adequate fluid replacement pre-operatively. The indications for rushing an injured patient into an operating room are practically confined to severe sudden haemorrhage. It was found during the war that seriously wounded patients taken to the operating room without much fluid therapy often died. Later in the war patients were given adequate periods of resuscitation; this varied from one to ten hours and included glucose solution, normal saline, blood and plasma intravenously, sometimes in large quantities.

I think a word about operating room equipment is in order. Adequate equipment can, of course, help to prevent emergencies arising and is essential in their treatment. One should have a modern gas machine, laryngoscope and endotracheal tubes at least, and these should be immediately at hand and in working order before starting even a minor anaesthetic. I might add that today the anaesthetist is often left without adequate

assistance. For all major surgery there should be at least two unscrubbed nurses in the operating room, one of whom is available to help the anaesthetist with the induction, intubation and intravenous therapy, etc. I was amused recently to see a colleague holding the intravenous tubing in his teeth; he explained that that was his third hand.

I will now deal with some of the respiratory complications that may arise under anaesthesia.

Respiratory arrest is the commonest and was at one time the most alarming event that occurred in the operating room. It is even commoner now since the introduction of curare. There are several causes, such as breath holding in light anaesthesia, an obstructed airway, deep anaesthesia, or carbon dioxide depletion such as occurs with over vigorous artificial respiration, or with the hyperpnoea of a crying child during induction. It may also occur following the administration of oxygen after a period of anoxia (due to the stopping of the anoxic carotid body chemoreceptor emergency reflex).

Not so many years ago cessation of respiration was the signal for dramatic, often traumatic, and largely ineffectual artificial respiration, combined with the administration of stimulants and probably the forceful dilatation of the anus. To the modern anaesthetist with a gas machine respiratory arrest *per se* causes no anxiety whatever, and the rest of the operating room personnel are often unaware that the patient has stopped breathing. I have yet to see a patient that could not be adequately and safely oxygenated by intermittent pressure on the rebreathing bag. (This is now called controlled respiration). One must, of course, have an adequate airway and the ability to keep an airtight, or almost airtight, fit of the mask on the patient's face. It is seldom necessary to insert an endotracheal tube, although an oral airway may be needed. I have never seen distention of the stomach occur during this manoeuvre, although it apparently does occur rarely. If a gas machine is not available one may blow directly into a face mask or use direct mouth to mouth insufflation. If an endotracheal tube is in place one can blow directly into it. A useful and fairly efficient method of artificial respiration is by rib traction. This is done by passing one's fingers under the costal margins at about the nipple line and pulling out and compressing the lower ribs alternately. All these methods should be used at about the normal respiratory rate and should be co-ordinated with the patient's own efforts when they

occur. I might add that an expensive machine is not absolutely essential; an oxygen tank with a reducing valve leading to a rubber rebreathing bag and face mask does nicely. The bag can be emptied once a minute to get rid of carbon dioxide.

Laryngospasm is another not uncommon cause for alarm. Its contributing factors are excess fluid in the pharynx which irritates the larynx, such as blood, vomitus, or the excess secretion of heavy smokers or under-atropinized patients; too rapid an induction with an irritating vapor such as ether; injudicious and early insertion of an oral airway or endotracheal tube and surgical stimulation of the too lightly anaesthetized patient. A combination of these causes is often acting. The condition is first manifested by stridor, which may go on to complete expiratory spasm with ever increasing cyanosis. The resultant anoxia increases the laryngospasm, which in turn increases the anoxia and therefore the spasm. Treatment is first directed at removing the irritating factor in the throat with suction and possibly utilizing the head low position or turning the patient on his side to allow the secretions easy drainage out of the mouth. Surgical stimulation should be stopped immediately also. Atropine gr. 1/100 intravenously should be given and curare 2-3 c.c's. if available; 100% oxygen should be forced into the patient's lungs and if this is not possible, and it often isn't, then the mask delivering oxygen should be kept on the patient's face so that the patient's first breath will be oxygen. Laryngospasm is usually self-limiting, but if the patient's condition should become alarming one should attempt to insert a semi-rigid endotracheal tube past the closed cords, or if this is not practicable or possible a tracheotomy should be done without delay.

Another pulmonary complication is flooding of the bronchial tree with pus or blood. This may occur due to the bursting of a lung abscess or during the needling of a lung. Patients in whom these accidents might occur should always have an oral tracheal tube inserted early during the anaesthetic. At the first sign of fluid in the lungs, the table should be placed in the steep Trendelenberg position and the bronchial tree aspirated with a urethral catheter. If there has been delay in recognizing the accident then bronchoscopy will probably be urgently needed.

I will now deal briefly with some of the commoner cardio-vascular emergencies. A fall in blood pressure is a very common untoward event under anaesthesia. The pulse is unreliable in judging the blood pressure, and all patients under anaesthesia of any duration should have their blood pressure checked frequently. It is convenient to have one of the patient's arms out on an arm-board both for the administration of intra-

venous fluids and drugs and for checking the blood pressure. One must attempt to diagnose the cause of the low pressure before instituting treatment.

Deep ether anaesthesia will often lower the blood pressure, sometimes quite markedly, and should be avoided when possible. The diagnosis is easily made here and confirmed by the rise in pressure as the anaesthesia is lightened. **An over-dose of pentothal** also causes a drop in pressure. The types of cases where this is most likely to occur are: old age, hypertension, toxæmia and shock. Patients who are toxic or in shock take very much less pentothal than they would normally. Even as little as 1 c.c. of 2½% pentothal in a shocked patient can cause apnoea and a severe drop in pressure. This category of patients also take much less of any anaesthetic, of course. **Anoxia** will produce a drop in pressure which is usually preceded by a rise of short duration. **Low blood volume** is probably the commonest cause of a drop in blood pressure. All major operations should have an intravenous running of dextrose or saline, so that plasma or blood can be administered quickly when indicated. As far as possible blood loss should be replaced with a small margin in the patient's favor. The treatment of shock includes lowering the head of the table and the administration of oxygen. Stimulants have very little place but neosynephrine m.i or m.ii intravenously may be necessary in the acute stage. This will restore the blood pressure temporarily pending the administration of blood or plasma.

There isn't time to discuss other causes of a drop in blood pressure but they include vagal reflexes, pulmonary embolus, coronary occlusion, and carotid sinus stimulation during operations on the neck.

Vomiting is, of course, a very serious complication during anaesthesia. If a patient has had solid food recently, the important time factor is that between the meal and the accident. Following an accident the stomach empties very slowly and food takes many more hours than usual to pass on into the small bowel. If the patient is thought to have excess fluid in the stomach or upper bowel, such as with intestinal obstruction, then the draining of the stomach with an indwelling suction tube of the Levine type pre-operatively, and which is left in place hanging over the edge of the operating table, greatly lessens the hazard to the patient. The usual teaching when giving an anaesthetic to a patient with food in the stomach has been to keep the head low to prevent aspiration if the patient vomits. If the anaesthetic is deep, and it often is to prevent vomiting, then gastric contents can and do well up into the pharynx past the relaxed cardiac and crico-pharyngeal sphincters. For this reason I prefer to elevate the head of the table about 8 degrees and induce with a non-nauseating

anaesthetic such as intravenous pentothal. I then give cyclopropane and make certain that the patient is kept well under so that he can't vomit. The anaesthetic is kept at this level until the operation is completed and the last dressing is in place. The patient is then turned on his side, the head of the table lowered 15 degrees and the patient observed until he is conscious. If a patient should vomit under anaesthesia and the extent of the operation permits, the patient is quickly turned on his side, the head of the table lowered and the pharynx aspirated and/or cleaned out with a finger covered with gauze. The patient, if the operation has not been started, is then allowed to completely rouse before recommencing the anaesthetic. If the operation is expected to take a long time or if the patient is to be on his face or in the Trendelenberg position, it would be best to insert an orotracheal tube under deep anaesthesia.

Some of the foregoing emergencies may, of course, go on to the pre-mortem stage, which is recognized by the complete absence of any pulse or heart beat. If the abdomen is open this can be determined easily by palpating the aorta. Otherwise the best method in an emergency is to have someone continually palpating the femoral artery as it crosses the pubic ramus; pulsation can be felt here when it is apparently absent elsewhere. When the cardio-vascular system has completely failed it is usual to inject m.5 of epinephrine into the heart. The best site is the right auricle, which is reached by passing a 5-inch needle through the third intercostal space immediately to the right of the sternum. The needle is directed downwards and towards the mid-line to a depth of $3\frac{1}{2}$ -4 $\frac{1}{2}$ inches in adults and about 2 inches in children. One should be able to aspirate blood before injecting. The needle prick alone is often sufficient to initiate contractions. One should not use adrenaline if cyclopropane or chloroform is the anaesthetic; neosynephrine m.v could be tried in these cases. If cardiac puncture fails to elicit a response, massage of the heart must be done without delay. During this time the lungs should be inflated rhythmically with oxygen. Six to eight minutes of complete cerebral anoxia will lead to irreversible changes in the cortical cells.

Methods of resuscitation of the clinically dead patient such as intra-arterial transfusion, intra-cardiac transfusion and with an artificial pacemaker are still not generally applicable, although they hold great promise.

Finally, I would like to mention the use of intra-cardiac and intravenous procaine. If cardiac irregularity is part of the picture of collapse one should inject 5 to 7 c.c's. of 1% procaine intravenously or into the heart if the chest is open.

One accident I would stress before closing is that of having the wrong cylinder on the gas machine, so that one is giving say nitrous oxide when one intends to give oxygen. The patient will be breathing well and the cardio-vascular system will be all right at first but there will be increasing cyanosis. When a mysterious cyanosis like this occurs it is well to change machines immediately or to let the patient breathe air which has adequate oxygen. A similar mysterious increasing cyanosis occurs when the gross flow valve of nitrous oxide is turned on inadvertently. I have seen this happen three times. Fortunately, the cause was twigged without too much delay.

A word about immediate post-operative care. All unconscious patients should be kept on their side or in the semi-prone position; the jaw and tongue then fall forward, thus giving a good airway. Also, if the patient should vomit he is unlikely to aspirate any of it. Any patient who has undergone major surgery should have his blood pressure checked frequently during the first twelve hours at least. Nasal oxygen should be administered at a rate of 6-8 litres per minute to any patient who is very restless or cyanosed.



Book Review (Continued)

causes. Viller writes upon Sore Tongue and Sore Mouth. Smith considers Thoracic Pain arising in the chest wall, in the mediastinum, in the respiratory tree and in the heart. Abdominal pain is the topic of S. Jordan. R. H. Freyberg contributes two chapters, one on Backache and Back Pain and the other on Joint Pain. Pain in the Extremities is discussed in all its phases by R. D. Williams. There is a comprehensive consideration of the mechanism and causes of Fever by Beebson. In his chapter on Disturbances of Consciousness and of Muscle Movement Lennox considers the many disorders of which these are symptoms. E. A. Stead writes upon Fainting and D. P. Barr upon Dyspnoea and Cyanosis. There is a chapter on Dehydration by McBryde and one on Oedema by Wood and Sylvester. Palpitation and Tachycardia are covered by E. Massie, while D. M. Skilling contributes a chapter on Cough and another on Hemoptysis. McBryde writes on Overweight and also on Under nutrition. Anorexia, Nausea and Vomiting are dealt with by J. L. Horner, who also gives a chapter on Constipation and Diarrhea. Hematemesis and Melena, Jaundice, Itching, and Nervousness and Fatigue are the titles of the remaining chapters.

The book itself is printed on good paper with two columns on each page. Each chapter is headed by an outline and concluded by a summary of its contents. Each article is well illustrated, some-

times in color, and subheadings make reference easy. The summary of each chapter is followed by a selected bibliography. There are 398 pages of letter-press and 40 pages of index. Its significant value lies in the fact that it gives the *raison d'être* of each symptom and not merely the disorders in which it appears.

Signs and Symptoms: Their clinical interpretation. Edited by Cyril Mitchell McBryde, A.B., M.D., F.A.C.P., Asst. Prof. of Clinical Medicine, Washington University School of Medicine, with 74 illustrations in black and white and 12 subjects in color in 6 plates. J. B. Lippincott Co., Montreal.

OBSTETRICS

Retraction Ring

Case Report

Bandl's Ring Associated With Labor in a Flat Pelvis. Primagravida

Miss A.V., Age 23

This patient first attended the pre-natal clinic at the Winnipeg General Hospital when 41 weeks pregnant. On examination, the vertex was presenting, the foetus lying in the R.O.T. position. The head was freely movable above the pelvic brim, lying to one side in the right iliac fossa. With pressure, the head was made to descend into the pelvic brim.

Pelvic measurements were as follows:

Interspinous diameter	22.0 cms.
Intercrestal diameter	27.0 cms.
External Conjugate diameter	19.5 cms.
Right oblique diameter	20.5 cms.
Left oblique diameter	21.5 cms.
Intertrochanteric diameter	31.0 cms.
Bi Ischial diameter	10.0 cms.

The subpubic angle and sacrosciatic notch seemed adequate.

The patient returned to the pre-natal clinic one week later for examination. She was now two weeks past term. Examination revealed the foetal head to be still freely movable above and to the right of the pelvic brim. X-ray pelvimetry was done (Colcher-Sussman technique), and reported as follows:

Actual Inlet—Anteroposterior	11.1 cms.
Transverse	14.7 cms.
Mid-Pelvis—Anteroposterior	13.0 cms.
Transverse (Bispinous)	10.5 cms.

Outlet—

Anteroposterior (Posterior Sagittal) ..	7.8 cms.
Transverse (Bituberal)	10.1 cms.

Type of pelvisPlatypelloid

Position of foetal head.....Not engaged

Location of vertexR.O.T.

Moulding of foetal head.....Slight

Lumbo Sacral Articula-

tionNo visualization

Separation of Symphysis.....Slight

CoccyxAcute anterior angulation

Subpubic angle62 degrees

Remarks of Radiologist

Flat pelvis which appears relatively roomy. The normal posterior curvature of the sacrum is absent. There is no definite disproportion. The placenta is not visualized.

Three days later, the patient was admitted to hospital at 3.15 p.m. Labor had begun at 9.00 a.m. the same day. Membranes had ruptured at 9.30 a.m. Abdominal examination found the head fixing in the pelvis, but not engaged. Contractions were very strong every five minutes. Estimation of disproportion by Munro Kerr's modification of Muller's method revealed no cephalo-pelvic disproportion. Rectal examination revealed the head to be high, out of reach of the examining finger. There was no dilation of the cervix, which was thick and soft.

One hour later (4.30 p.m.) the patient was re-examined. Contractions were very strong, every 1-2 minutes. On inspection of the abdomen, a ridge was noted. This took the form of a broad arc, approximately one inch in width, convex above and curving across the abdomen approximately two inches below the umbilicus. On palpation, the ridge felt thick and fleshy. The lower uterine segment was thinned out and tender on pressure. Foetal heart sound good. This ridge was diagnosed as a Bandl's retraction ring. Rectal examination found the cervix to be one-half dilated. The head had descended to the level where it could be easily reached with the examining finger but was above the ischial spines.

The patient was now being closely observed and she was examined at frequent intervals. Contractions were very strong and the head now descended rapidly through the pelvis. The retraction ring did not become any more marked, nor did it rise any higher on the abdomen. The patient showed no signs of exhaustion or distress. Foetal heart sounds were good. At 5.30 p.m. the head had become completely engaged and was below the level of the ischial spines. At that time, the cervix was three-quarters dilated. At 6.45 p.m. the cervix was fully dilated and the head down below the level of the ischial spines.

She was taken to the caseroom at 7.15 p.m. and prepared for delivery, using the lithotomy position.

Vaginal examination revealed the head to be in the right occiput transverse position—the occiput to the right, the sagittal suture in the transverse diameter of the pelvis posteriorly. The anterior parietal bone was presenting (anterior asynclitism). The position of the head was confirmed by palpating the anterior ear behind the pubis, the posterior ear being difficult to reach. Under deep anesthesia, the asynclitism was first corrected manually and the occiput rotated to the front. Mid forceps were applied, and using the axis traction the foetus was delivered as an occiput anterior at 7.55 p.m.

The foetus weighed 8 lbs. 7 ozs., and was in good condition. There was a large caput present in the mid portion of the left parietal bone. The placenta followed within a few minutes.

The puerperium was uneventful except for a post partum cystitis which responded quickly to chemotherapy and the patient was discharged from hospital on the tenth day.

Discussion

Normally under the influence of labor pains, the uterus becomes differentiated into two portions separated by a circular ridge of tissue, the retraction ring. The upper, by its contractions serves to expel the child, while the lower undergoes dilation and passively forms part of the canal through which the contents of the uterus are expelled. When, however, a serious obstacle is opposed to the passage of the child, the active portion of the uterus is stimulated to more forcible efforts. As it contracts, it likewise slowly becomes retracted, its lower margin, the retraction ring, eventually occupying a much higher level than usual. As a result, the passive lower segment becomes stretched and thinned. At the same time the retraction ring separating the two portions becomes thicker and more prominent, so that it

can readily be palpable, and occasionally seen as a transverse or oblique ridge extending across the abdomen just below or even in a level with the umbilicus. The importance of the retraction ring lies in the fact that it indicates a marked thinning of the lower uterine segment, which if carried too far may lead to rupture of the uterus.

In spite of radiological and clinical findings, the presence of a marked retraction ring in the case presented above would seem to indicate some degree of cephalo-pelvic disproportion. In keeping with a flat pelvis, this disproportion was completely at the inlet of the pelvis, the foetal head not passing through the pelvic brim until shortly before delivery. Once the head had passed through the inlet, descent was rapid and dilation of the cervix was completed readily. It is interesting also to note that the head engaged in the transverse diameter of the pelvis, and remained in that diameter throughout its descent. The presence of a parietal obliquity, in this case, an anterior asynclitism, is also in accordance with the mechanism of labor in a flat pelvis.

In regard to treatment, a policy of "watchful expectancy" was adopted in this case. Radiological and clinical evidence pointed to no great disproportion, in spite of the flat pelvis. Accordingly the patient was allowed to go into labor naturally. No undue anxiety was felt until the presence of the marked retraction ring was noted. At this point the patient was just beginning to make progress, in forcing the head through the inlet, and as she showed no signs of exhaustion, it was decided not to interfere but to allow the labor to proceed naturally, under careful supervision. Fortunately descent occurred rapidly once the foetal head was through the brim, and there was no evidence of further thinning of the lower segment.

Dr. Leon Rubin.

GYNECOLOGY

Cancer of the Cervix Uteri—the Results of Treatment With Radium

By R. G. Maliphant, M.D., F.R.C.S., F.R.C.O.G.

This is a review of 837 cases of Carcinoma of the cervix between 1921 and 1941.

From 1922 to 1930 the Interstitial treatment with radium was used with an overall five-year salvage rate of 11.1% and satisfactory results with only stage 1 carcinoma. In the period 1930-41 the Stockholm technique increased the five-year salvage rate to 25%.

Fifteen per cent of women surviving five years subsequently die of their disease. The five-year figure used as an index should therefore be termed as salvage rather than a cure.

There is no apparent relation between the age of the patient and the cell type, nor in this series was there any relationship between age and prognosis. Also cancer of the cervix in the multiparous differs in no respect from the disease in the parous woman with respect to pathology or five-year salvage rate. Again the histology of the neoplasm does not affect its clinical appearance, most being of the ulcerative type. It is noteworthy that more than half the adeno-carcinomas were hypertrophic growths, while anaplastic carcinomas were uncommon in this form.

With radium results were as good in anaplastic carcinomas as in the less malignant spinal cell growths. The more malignant anaplastic tumors appear to be more susceptible to radiation and the

balancing of the two factors of malignancy and radio sensitivity gives nearly the same five-year salvage rate in all cell types.

Stages 1 and 2 (early cases) when anaplastic, gave a five-year salvage rate of 52% and when differentiated the rate was only 27%, perhaps suggesting surgery for the less malignant types, even in the early stages of the disease.

Hypertrophic cauliflower-like cancers have shown better five-year results than the ulcerative types—43% to 18%, respectively.

There was usually an average of seven to eight months' loss of time between the first symptoms and the initiation of treatment. The extent of the disease could not even be estimated approximately by the duration of symptoms and therefore the length of the history bears no relation to the extent of the lesion and therefore to prognosis.

In 14% of cases the first symptom was pain. Irrespective of the stage of the disease the presence of pain in a case of cancer of the cervix has an adverse influence on the outlook.

This is shown by the fact that 80% of stage 1 cases without pain survived five years while only 55% of stage 1 cases with pain had the same prognosis.

The overall five-year survival rate for the various stages are:

1. 67.5%
2. 40% —Overall survival for 5 years, 25.2%
3. 17.7%
4. 5%

This indicates the need for earlier diagnosis.

From the Journal of Obstetrics and Gynaecology of the British Empire, April, 1947.

I. Zeavin, M.D., W.G.H.

PAEDIATRICS

That Hidden Focus of Infection

Isadore Wolch, D.D.S.

One of the most distressing problems that presents itself to the dental profession is that of fractured anterior teeth in children. It is fairly common for youngsters to traumatize a front tooth, especially if they happen to possess prominent teeth that are not fully covered by the lips. The simplest solution to such a case is to extract the tooth and construct a partial denture to carry the replacement. However, this is merely following the path of least resistance. Partial dentures, particularly in a growing child, can be very harmful to the teeth and the gums that it must rest upon. The preferable type of restoration is a fixed bridge. Under the age of sixteen, it is contraindicated to cut into teeth to obtain retention for bridge work since the pulps are still close to the surface and can be injured by any extensive operative procedure. That leaves only one solution when a tooth has been so traumatized as to injure the pulp, namely pulpectomy. This results in a pulpless or devitalized tooth on which almost any type of fracture can be repaired with a permanent and aesthetically satisfactory restoration.

With most medical men, when the subject of devitalized teeth is introduced, they immediately refer to them as dead teeth and possible foci of infection. Insofar as the first misconception is concerned it can be definitely proven that pulpless teeth are not dead. Wasserman, Blaney and Volker, using radioactive phosphorus, found that pulpless teeth have definite metabolism. This is explained by the fact that the technique of pulpectomy does not affect the blood supply into the cementum of the root from the periodontal membrane. This gives the tooth a vital relationship

with the surrounding tissues. Furthermore, if it were dead, one would expect a pulpless tooth to be exfoliated similar to a foreign body. Many a patient has retained pulpless teeth for twenty-five years and more with no apparent ill effects.

The two men most responsible for the colossal sacrifices of human teeth at the altar of focal infection were William Hunter and E. C. Rosenow. Firstly, it must be emphasized that Hunter in his epochal address in Montreal in 1910 did not pick out the pulpless tooth as the source of oral sepsis. He was condemning the techniques then in vogue which produced ill-fitting crowns and bridges that were cesspools of filth. Insofar as Rosenow's theory of elective localization is concerned, it is a fact that most bacteriologists disagree violently with his conclusions. In 1938 Cecil and Angevine wrote: "Many of us who originally accepted the theory of focal infection with enthusiasm are now wondering if the time has not arrived for a revaluation of the whole theory. Many thoughtful students today question seriously its validity and some are quite willing to throw it completely overboard. Scientific men are becoming a little wearied of the universal acceptance of a theory as though it were a fact." Mac Nevin and Vaughan analyzed the evidence formed against focal infection and concluded that the proof submitted by Rosenow, Price and others has its limitations from the standpoint of technique and interpretation of results.

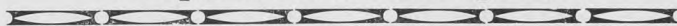
At this point it might prove interesting to review briefly the technique of modern root canal therapy. Teeth with infected pulps are treated either by conservative or radical methods. In the former, the pulp is removed with a sterile technique and medication is applied until such time as cultures from the root canal are negative. Then

the canal is hermetically sealed. The radical technique is used in cases where extensive infection has penetrated through the apex of the tooth. This is usually apparent on X-ray examination as an extensive area of bone rarefaction or absorption of a portion of the root apex. After removing the pulp, a flap is opened over the apex of the root, the apical tip is sectioned and the whole area around the apex is thoroughly curetted. Penicillin and sulfa drugs are usually placed before suturing and filling the canal. Percentage of successes with the above techniques is anywhere from 90 to 99 per cent.

In conclusion I would like to appeal to the

medical practitioners for a greater degree of co-operation with the dentists. I doubt if any doctor would refer a patient to an otolaryngologist with specific instructions to perform a Caldwell-Luc operation. He most likely would ask the specialist to examine the patient and do whatever was indicated. Yet it is very common for patients to present themselves to the dentist saying: "My doctor wants these two teeth removed as he is sure they are causing my backache." With all due respect to the doctors of medicine, the doctors of dental surgery are in a better position to decide whether the mouth harbors any hidden foci of infection.

Hospital Clinical Reports



Reported by J. M. Whiteford, M.D.

Winnipeg General Hospital

A Case of Acoustic Nerve Neuroma

Dr. J. M. Kilgour and Dr. Hugh Cameron

Dr. Kilgour presented the history of a woman of 41, who noticed beginning deafness in the right ear at the age of 28. The deafness has been complete for the past eight years. She reported severe headache and loss of vision, increasing for several months prior to investigation which was begun January 31, 1947. For one week prior to this time she had noticed numbness of her right face with slight weakness, also staggering gait—staggering usually occurred to the right. Examination showed marked nystagmus with the slow component to the right and a lateral rectus palsy on the left side. There was an intranuclear type of paresis of the right 7th nerve and loss of sensation over the right face, including the cornea. There was right sided dysdiadochokinesis and on one occasion there was a suggestion of plantar extension on the left side, but this was not constant. X-ray examination of the skull was negative. Visualization of ocular fundi showed extreme choking of both discs. Electroencephalogram was not normal but showed no localizing characteristics. This was considered to be a characteristic case of right acoustic nerve tumor.

Dr. Hugh Cameron reviewed the important points noted at operation for resection of the tumor. Operation was followed by improving vision and a diminution in the ataxia and nystagmus. Facial paralysis seems to show some evidence of recovery and is being treated with physiotherapy; if recovery is not adequate hypoglossal-facial anastomosis will be considered at the end of a year. There has been no change in hearing, although there is slight bone conduction on the right side.

Dr. Childe: Most of these tumors can be visualized by X-ray but a small percentage lie almost

entirely within the cranial cavity, and since the internal auditory meatus is not involved this group cannot be seen in X-ray photographs.

Dr. Penner: The pathological findings were those typical of acoustic neuroma.

Dr. A. C. Abbott: Will the changes in the facial muscles not be too extensive to respond to a hypoglossal-facial anastomosis if this patient is left for a year before the anastomosis is done?

Dr. Cameron: If it were possible to be sure that the facial paralysis is complete at this time the anastomosis should, of course, be done immediately, but there is at present some hope that the paralysis will diminish and we intend to wait until the maximum improvement has been obtained with physiotherapy and facial supports.

A Cured Case of Staphylococcal Septicaemia With Endocarditis

Dr. C. H. A. Walton

Dr. Walton presented the case of a 23-year-old woman. On admission she was hallucinated, with a temperature of 103 degrees by axilla, vomiting, and a cough productive of much mucoid sputum. She had marked urinary retention which was relieved by catheterization. Examination was otherwise negative. Within the next two days urine culture and blood culture showed haemolytic staphylococcus aureus which was coagulase positive. The white blood count was 9,000. Lumbar puncture showed a few white blood cells and the culture was negative. In a lucid interval the patient gave a history of an infected scratch of a great toe on December 23, 1946, with subsequent pain in the calf on that side which had been relieved by vigorous massage. X-ray of the chest showed diffuse mottling suggestive of multiple emboli. A systolic murmur was noted early in the course of the disease which subsequently became rougher and a diastolic murmur developed, and later gallop rhythm appeared. The diastolic blood

pressure which on admission was 70 mm. dropped to 50 mm. A diagnosis of acute bacterial endocarditis was made. A second lumbar puncture showed 12,000 polymorphonuclear leucocytes. The spleen was palpable.

Treatment was begun on admission and consisted of full dosage of sulfadiazine which was continued throughout the treatment and intramuscular penicillin 40,000 units every 3 hours. This was subsequently increased to 60,000 units every 2 hours when it was found that the lesser dose was not sustaining an adequate blood level. On January 23, 1947, chest began to clear and the patient improved steadily from then on.

Dr. Walton noted that the consensus of opinion in the current literature on this type of case is that adequate blood levels of penicillin should be maintained for a minimum of 8 weeks.

A Survey of the Relation Between Epilepsy and Pregnancy

P. W. F. Burnett, M.D., M.R.C.O.G.

Journal of Obstetrics and Gynaecology of the British Empire

The literature regarding epilepsy in pregnancy is reviewed. Most writers agree that epilepsy has no effect on pregnancy, although when some effect is noted, a variable picture may be seen. Nearer the truth is the statement that one-third of the cases improve, one-third become worse, and one-third remain unchanged.

The authors analyse a series of 21 deliveries in 18 epileptic mothers over a seven-year period. In only one case was there a family history of epilepsy. In 3 cases the fits began in the same year as menstruation. In two of the cases the fits began with gestation. Eight of the cases became worse during pregnancy, eight were improved, and two were unaffected. The season of the year bore a relation to some of the fits. There were no premature labours, and labour and puerperium were normal in each case. The infants were all well (with one exception due to other causes) and no relation between fits and foetal sex was noted. In none of the mothers was the epilepsy aggravated by breast feeding.

The cause of the convulsion during pregnancy is explained as follows—Epileptic subjects have a distinctive pattern of cerebral waves known as "cerebral dysrhythmia." This is present in all epileptics at time of seizure and in 90% between seizures. They are found in 10% of normal people. It is a familial trait. Cerebral dysrhythmia is the predisposing factor and an exciting factor is required to give rise to a convulsion. Gestational epilepsy would then be regarded as the culminating event when the strain of pregnancy is imposed on a susceptible dysrhythmic individual. The mechanism whereby epilepsy is worsened during preg-

nancy is ascribed to one, or a combination of many factors. Among them are water retention, CO₂ deficiency hypo-calcemia, and possibly altered relationships. Those cases which improve are thought to be affected by a temporary ketosis.

Cerebral dysrhythmia is the connecting link between epilepsy and eclampsia. In eclampsia it is the cerebral vasoconstriction with or without edema which serves to fire off a convulsion. While in epilepsy, the exciting mechanism is one of the factors mentioned above.

A case of status epilepticus in pregnancy is presented and termination of pregnancy, which was successful in this case, is advocated as the treatment of choice.

Sterilization is advocated only for those cases who have been rescued from status epilepticus.

The statistics of recent observers and the results of electrical tracings combine with clinical experience to suggest that the inheritance of epilepsy is an infrequent occurrence; one can conclude accordingly that eugenic grounds offer no real indication for the termination of an established pregnancy or for sterilization.—Dr. L. Rubin, Resident Obs. and Gyn., Winnipeg General Hospital.

Bronchiectasis

Dr. J. D. Adamson

Bronchiectasis is a common clinical entity and is usually easily diagnosed. Recent improvements in therapy make early diagnosis even more desirable than previously. These improvements in therapy include: (1) Sulfonamides and/or penicillin, parenterally or by inhalation. (2) Repeated bronchoscopic drainage. (3) Lobectomy.

Diagnosis:

(1) History: The history in the case of bronchiectasis characteristically includes chronic cough over a period of years, punctuated by episodes of acute pulmonary infection, often diagnosed as pneumonia, bronchitis or pleurisy.

(2) Physical Examination: Evidence of pulmonary infection with persistent basal post-tussive crepitations with the possible inclusion of clubbing of the fingers and foul breath in a patient in poor general physical condition.

(3) X-ray: (a) Flat plate commonly shows basal fibrosis and may show cavitation. (b) Lipiodol bronchogram will almost always show bronchial dilatation or saccululation. It should be noted that if dilated bronchioles are full of secretion or if they are cut off from the main bronchus by stenosis or spasm a bronchogram may fail to visualize the bronchiectatic process. However, even in the absence of a positive bronchogram evidence of chronic basal sepsis and fibrosis over a period of years is tantamount to a diagnosis of bronchiectasis.

Dr. Adamson presented the case histories and chest X-rays of two atypical cases of bronchiectasis. The first was of a woman of 33 who had pneumonia in childhood and since that time had recurrent chest colds. Since December, 1943, she had three episodes of massive haemoptysis. Some difficulty was encountered in discovering the origin of the bleeding, but gastro-intestinal haemorrhage was ruled out and X-ray showed bronchiectasis limited to the lower left lobe. Dr. Schoemperlen reported that bronchoscopy of this patient showed no evidence of endobronchial disease, but this is not an uncommon finding in cases of so-called "dry" bronchiectasis. Lobectomy is considered to be the treatment of choice in this case, since the process is relatively localized and in a woman in her 30's.

The second case was that of a man now 72 years of age, who, in 1935, was investigated for left chest pain and cough. X-ray at that time showed left pleural effusion, and 4 ounces of sterile fluid were obtained by aspiration. From 1935 to 1943 this man suffered recurrent episodes of temperature and arthralgia, and a diagnosis of gout was made. In January, 1947, attacks of temperature and arthralgia became more marked. Investigation was repeated and X-ray showed atelectasis and bronchiectasis in the lower left lobe. Dr. Schoemperlen reported marked stenosis and spasm of the left lower lobe bronchus, which was dilated, and improved breathing was reported by the patient. In a man of this age, repeated bronchoscopy with sulfonamide and penicillin therapy is the treatment of choice.

Two Cases of Sprue Syndrome

Dr. J. W. Macleod

The first case was that of a woman, aged 36, who was born in Egypt and came to Canada via England in 1912. In 1930 the diagnosis of pernicious anaemia was made and the condition responded satisfactorily to liver therapy. In 1931 she was investigated for arthralgia of knees and an anaemia of hyperchromic type. In 1942 she was again treated as a case of pernicious anaemia with transfusions and liver therapy. From 1943 to 1945 she had an anaemia which alternated from a hyperchromic to hypochromic type; which did not respond particularly well to adequate liver therapy. During this time she also showed abnormal damage from minor injuries, e.g. she was bed ridden for several weeks as a result of a minor bruise to one knee.

The current investigation began in January, 1947, at which time the anaemia was moderate, weight, 75 lbs.; teeth were loose with infection of the gums and thoracic scoliosis was noted. She also complained of cramps in hands and feet. Laboratory and X-ray investigation revealed the following: (1) Osteomalacia with pathological frac-

ture of the lower end of the left femur. (2) Low serum calcium. (3) Frequent loose, pale stools with an abnormally high amount of split fats. (4) A glucose tolerance test showed an abnormally low curve. (5) Gastric analysis showed free fasting acid value of 20. (6) Blood proteins were low. (7) Liver function test by the hippuric acid method was 48%.

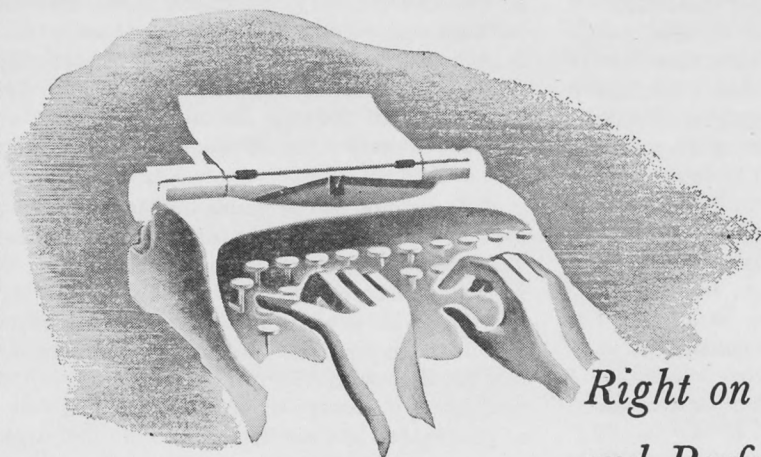
The cramps in the hands and feet proved to be typical carpo-pedal spasm of hypocalcemic tetany. This was considered to be an example of the sprue syndrome characterized by poor intestinal absorption of several food factors, with resulting malnutrition and anaemia. Treatment consisted of low fat diet with vitamin supplements, especially vitamin D in dosage of 50,000 units a day as well as graduated exposure to ultraviolet light. Calcium was administered intravenously and orally, iron was given as tolerated, and liver in both crude and concentrated forms was also given. The general condition of this patient has improved to a marked extent and there is X-ray evidence of improved calcification in all the bones with satisfactory healing of the fracture of the femur. The patient is able to walk without help.

The second case was that of a woman of 66, whose history included severe infantile rickets in infancy and rheumatic fever at the age of 12 years with residual myocardial stenosis and later auricular fibrillation. Her current illness began with (1) recurrent diarrhoea in 1917; this persisted with exacerbations and remissions until the present time. Stools have always been soft and pale, and exacerbations have been accompanied by weight loss. (2) Anaemia to some extent throughout her whole life, for which she had received liver injections. On admission in June, 1946, pigmentation of the skin was also noted, which she said had been present for some time. The laboratory findings showed the same abnormalities as in the case previously noted, except that gastric analysis showed no free acid.

Response to treatment up to the present time has not been as satisfactory. The blood proteins have remained low despite intravenous and oral administration of amino acids.

Dr. Childe reported the X-ray findings in the first case as noted above and then gave a report of X-ray findings in the second case as follows: (1) Generalized bone demineralization. (2) Marked hypomotility of the small bowel on barium series. (3) A diaphragmatic hernia containing the transverse colon.

Dr. Macleod noted that a sprue syndrome should be suspected in any case of (1) hyperchromic macrocytic anaemia which did not respond well to liver therapy and in which gastric analysis showed free acid; (2) pathological fractures or hypocalcemic tetany; (3) deficiency state in the presence of an adequate diet.



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Medical Women's International Association

Reported by Anna E. Wilson, M.D.

The fifth Congress of the Medical Women's International Association meeting in Amsterdam in June provided a good excuse to visit Holland especially when Dr. Margaret Owens, National President, and I were privileged to represent Canada.

By happy chance the Dublin Rotunds celebrated its Bicentenary in July, and in this air minded age it was easy to hop to Dublin on our way home.

By way of Prestwick we flew to London where we spent the first night at the Mayfair Hotel. It was cold—there was an ample supply of hot water though. We had a foul supper of pigeon pie and soggy spinach and a light custard. We arose from the table quite hungry. The price was 17s 6d., the service surprisingly poor.

Before retiring I skipped out to view Piccadilly and Trafalgar Square and glimpse the Thames Embankment. The evidence of damage to buildings is still present—the unoccupied business offices, the dimness of the lights, the inevitable queues, the general apathy of people are strange contrasts to the London of 1939. Early next morning we flew direct to Amsterdam.

The Dutch officials and police were very busy. There was a general air of hustle and bustle but finally everything was straight—visas purchased and money counted out.

On the way through the suburbs one felt that the Dutch women had washed curtains and shined windows as a special welcome. All the houses were clean, tidy and ship-shape. We stayed at the Doelen Hotel on the Amstel Canal and were awakened at 5 in the morning by the neighbors washing the cobble stones and beating the feather mattresses which they then air from their windows.

There seemed to be plenty of food in the hotels—fresh strawberries, cream, asparagus, cheese, butter, chicken, brown bread. It was all well cooked and well served but fairly costly. Until we visited the homes we couldn't realize the food shortages and difficulties.

Clothing was patched but clean. One of our waiters had "tails" sewed on his coat which were obviously of a different shade from his coat itself but there was an air of gaiety and friendliness.

The canals and harbor of Amsterdam are fascinating. All were busy and full of ships and boats. Since the war the whole harbor has been rebuilt. There stood a huge whaling vessel with a giant hole in the prow through which the victim is dragged to the deck. Whale oil is being used to manufacture margarine. Here were ships ready to sail to the Orient—newly painted with flags flying. The floating dock sunk in one piece by

the Germans is being raised piece by piece by the industrious, busy Dutch workmen.

Superficially, as we went about from place to place, things seemed to be going well. There is an air of bustle and cheer about the place. We had plenty to eat because of a special grant to the Congress by the Dutch Government. In the homes the people still want for food, especially protein substances, and are obliged to live very frugally. They are so glad to have their little country back that everyone seems to be working to tidy and polish it.

There are great tales of the occupation. Nearly all citizens harbored fugitives in their homes. If they were caught the penalty was death—as testified by mounds of earth outside Amsterdam, which are marked by Dutch flags to show places where twenty or more citizens were killed en masse.

All Jewish children under two years of age were loaded in beast cars and removed with Jewish doctors and nurses in charge from Amsterdam to Poland. As the train was without food, water or extra clothing 54% of the children were dead on arrival. Only 10% of the Jews returned to the Quarter after the war. It is practically unoccupied at present.

I visited the children's wards at the Binnen Haust Haus and Wilhelmstrasse Hospital with a young Dutch pediatrician. Here one could see cases of severe malnutrition and vitamin deficiencies still in Hospital. The cribs were covered by Canadian Red Cross blankets.

The young intern was most enthusiastic about a baby 3 weeks old with congenital absence of the left diaphragm which was to be operated on shortly. I told him of one a surgeon here had successfully "done" 3 years ago and reported in the C.M.J.

The Dutch were high in their praise of the Canadian soldiers who relieved them. Certainly the best **Ambassadors** Canada could have had were these young men who were kind and generous to these people whose country they helped to liberate.

The Congress of Medical Women met in the Aula of the Colonial Institute. There were 350 delegates—sixteen countries were represented. It was a most successful gathering from an International point of view—and was marked by outstanding hospitality of the Dutch Government and people and above all by the Dutch Medical Women.

It was a wonderful experience to meet and talk with women physicians who had endured six long years of war; but who were looking forward with zeal and sincerity to their share in the task of re-building. The contacts made possible by

the meeting should be of value in increasing international understanding and good will.

The theme of the Congress was "The Responsibilities of Medical Women in the Reconstruction of the Post War World." Because the papers presented contained valuable information it was felt that this should be made available in another article.

A Dutch woman, Professor Charlotte Ruys, professor of the Microbiology of Infectious Diseases at the University of Amsterdam was elected president. She is a remarkably fine person. In 1945 she was taken prisoner by the Germans because she was connected with a group operating a wireless transmitter for the Allied Intelligence Service. She was released from the prison in La Hague when the Germans surrendered. After the war she married a Dutch playwright and producer who was also in the Intelligence Service. In 1947 she had visited the United States on a travel grant from the Rockefeller Foundation to study the progress of serology and bacteriology since the war.

Vice-Presidents were selected from United States, Finland, Denmark, Poland, U.S.A. and Canada. The Secretary's French, the Treasurer's English so it is indeed an International Council.

The Burgomaster and Municipality of Amsterdam entertained the delegates at a Reception at the Town Hall. Here we heard beautiful music and visited the museum and saw a French Exchange Exhibition of pictures and costumes at the time of the French Revolution. An excursion of the Hague took us through the Peace Palace and to another museum where we saw Rembrandts' famous "Anatomy Lecture"—and well known pictures by the Hals brothers and Vermeer.

We were received by the rector and senate at the University of Leyden in the Grand Aula. The rector was a hero of the Dutch Underground. He spoke beautifully and we had the feeling that he was a great man. Tea was served in the historic old garden under trees which are hundreds of years old. We saw crops growing in the re-claimed flooded areas.

The Municipality provided a boating trip through the canals and out into the harbour where we followed the same route as Churchill's party. Our boatman, who was a member of the party, recalled that no Royalty had been received as Churchill had been.

On our way to the Hooge Velluwe, a scenic National Park in the North, by bus, we visited Arnheim cemetery. The Dutch women brought flowers for the graves which are well tended by neighboring town folk. There are many unmarked Canadian graves.

At Hooge Velluwe the Council of the Dutch Medical Association offered us lunch in the historic hunting lodge of St. Hubert where recent con-

ferences of delegates from the Indies had ended unsuccessfully. In this park is the most attractive modern museum where paintings of Van Gogh, Renoir and other famous artists are exhibited in a very charming way. We were most interested to see how the Dutch have preserved many of their art treasures. They are familiar with the Rembrandts and Vermeers and Van Goghs. The museums seem alive and part of their daily life. They speak of the pictures familiarly as if they were old friends.

A young Dutch Doctor took me to the Ryks museum where special permission was obtained to display the famous "Night Watch" by Rembrandt. They are restoring the picture with great care. It is interesting to see the color brought out to reveal that it is not night but the high noon that Rembrandt represented.

In this museum too are Rembrandts famous "Jewish Bride," the Burgomeisters and Vermeer's originals, "The Letters" and "The Cask."

We attended the Municipal Theatre one evening to hear Charlotte Kohler—the Ruth Draper of Amsterdam render *Frasquita* in English—a language she had acquired only 3 months previously.

One evening the citizens invited in small groups to their homes where they all took part in musical entertainment and amusing and charming conversations.

We came away from Amsterdam on the hottest day in 100 years with a feeling of love and admiration for the thrifty intelligent Dutch people.

A week in England revealed that food and lodgings are expensive. The queues are frustrating—queues for tickets, information, food, shows, buses, etc. People seem apathetic and weary—hungry and shabby. Two years after war one is amazed at the extensive damage to buildings. Flowers, weeds and shrubs grow in the excavations around St. Paul's and along the embankment little re-building has been started. In the country small crowded towns of war time houses dot the beautiful countryside.

Visits to friends in the country and in London reveal the difficulties of housing, feeding, education and government. One would like to bring them all to Canada and give them the best one can afford. The hero of the post-war world is the British housewife who surmounts all difficulties of food, clothing and shelter to carry on a satisfactory British way of life.

Two events stand out—a memorable dinner with University of Alberta graduates—the Haltons who live in Hampstead, and attendance at A. P. Herbert's show at the Adelphi: "Bless the Bride."

We crossed to Ireland on "Aer Lingus" to attend the Conference in Dublin—were lodged in the Hatch Hotel in Lower Hatch which augured well

for an Obstetrical Conference. Dublin, according to travellers who had been there before, is as slap happy as ever. It is shocking to a Canadian to see droves of ragged, dirty children chatting in Erse and begging in English—barefoot in the cold, wet street; to see old men and women begging or selling matches; and workmen drunk at mid-day on their main streets.

—As shocking as it is to see babies delivered at Coombe Hospital carried directly from Case room to ward to lie in bed with the mother.

Six hundred doctors were present from all over the world. The names sounded like a roll call of famous men and women text book writers of Obstetrics and Gynaecology. Sir Eardley Holland, Munro Kerr, James Young, William Gilliatt, Nixon, Greenhill, Stander, Irving, Cunningham, McIlroy, Green Armytage—and legions of others. The papers were disappointing and dull—obviously written to be published—and read in a fumbling mumbling fashion. They were long and wearisome and almost all speakers exceeded the time allotted and had to be stopped by the Chairman's gong. However, there were a few outstanding contributions.

The discussions, on the other hand, were as lively and humorous as the papers were dull. There was a pert display of humour and many amusing tales were told.

A beautiful memorial service to Bartholomew Mosse, the founder, was held in the Chapel of the Rotunda the Sunday preceding the conference.

The proceedings were opened by Sean O'Kelly, President of Eire, whose welcoming address was: in Erse and English. A brief discussion on the history of midwifery was presided over by Eardley Holland but when James Young took the chair for the session on Puerperal Sepsis the revelations began. Outstanding contributions were given by Nixon of University College, London and Mahfouz—Professor from Cairo, Egypt. The debt we owe to the sulpha drugs and penicillin was stressed many times by all speakers.

The sessions on Eclampsia were confused and theoretical. Stander-Irving, Johnstone, spoke. Mitra from Calcutta, a mathematician by nature, showed by myriads of charts the relation of eclampsia to the science of numbers. He was most obnoxious when stopped in his discussions and said he had come a long way to hear "post graduate" lectures.

Theobald of England, claimed the improved British Statistics in relation to Toxaemia were not due to bombs, or housing shortages but to better diet. He said women were so perverse—you could give them milk, they wouldn't have it; you could buy them milk, they wouldn't drink it—but ration it and they **will** have it.

Dugald Baird of Aberdeen, was outstanding in his contribution to Toxaemia and also Foetal and

Neonatal care. Men from Amsterdam, Hong Kong, Sydney, Cairo and other large cities told of conditions during the war and post-war in relation to the diet and treatment of pregnant women.

In the discussion on shock, Greenhill of Chicago, and Spain of Dublin, gave interesting contributions. Spain opened his talk by saying that to him "shock" in obstetrics was shockin' obstetrics." He was interesting and easy to listen to. The meeting at this session became confused—shock and post-partum hemorrhage were intermingled.

All speakers seemed most concerned about the problem of improving the obstetrical practise of the General Practitioner. It turns out that most babies delivered in the world are helped by practitioners and midwives after all. The importance of educating the practitioner and midwives was stressed especially as to careful prenatal supervision, and the care and treatment of prematures, the prevention of birth injuries, etc.

One general practitioner after lengthy discussion on the education of his group got up to say he felt like a mongrel at a dog show. He had no class himself, but he had met some good dogs.

Munro Kerr voiced everyone's appreciation of the conference when he stressed the importance of meeting people and exchanging views in the discussions and at the social gatherings.

There were many social events. We felt like the small boy who stated "Never have I endured such pleasures." All the parties were formal. At the reception given by Dr. and Mrs. Solomons at the Royal College of Physicians there was excellent music and de Valera was also there. Sean O'Kelly and Mrs. O'Kelly gave a lavish reception at the Arus An Uachtarain in Phoenix Park. Here we strolled about with Church dignitaries and diplomats to the strains of Irish pipes, and admired trees planted by Queen Victoria's children.

The masters of the Rotunda had a garden party at the Rotunde. It was cold and rainy so one spent the time indoors admiring an air-conditioned premature ward, looking at pathological specimens and a film on Caesarian Section and reading signs in the O.P.P. advising patients in letters 2 inches high how to cure lice.

Speeches were amusing and short at the Congress dinner and there was a wealth of spirits.

Guinness's had a reception and showed their Industrial medical set up and served the stuff which makes the name famous.

The Irish Medical Journal had a sherry party preceding the special performance of the Abbey Theatre. The two most memorable events in Dublin were the performance by the Abbey Theatre players and the historical exhibit in the Library of the College of Surgeons.

The soft voices and excellent acting spirited us away from the shabby disappointing little

theatre and we lived "In the Shadow of the Glen," a one-act play by Synge and "In the Workhouse Ward," a comedy by Lady Gregory. The last play by Yeates, "The Word Upon the Window Pane," was especially enjoyable.

The exhibition of books and manuscripts was too extensive for complete enjoyment, but here one could see in spidery old writing McBrides case book—and notes on Smellie's lectures, Minute Books of the Hospital, The Master's Books dating back to 1793, old engraved anatomy books. "The Handmaid for Expert Midwives"—1671.

The Congress badge was designed from the old Rotunda Governor's pass which was shown in a case cast in metal.

We went from Dublin to Belfast on July 12th—a great mistake for travellers—by train. We stood in the queue and carried our luggage along with the celebrities from the Congress. The train burned peat and stopped so often we got the impression they'd got out to cut another sod.

Friends in Belfast drove us up the Antrim coast to the Giant's Causeway and Port Rush.

In Glasgow Dr. Sylvia Gunn was most hospitable and generously drove us up to Fortingall where we spent a week in the most wonderful place in the world—the Highlands of Scotland. Trips around Perth were beautiful especially as the hills were becoming purple with the bell and real heather.

We became egg collectors and diligently gathered eggs for friends in Edinburgh. Laden with these eggs and a chicken complete with legs we arrived at the Caledonian Hotel just as the Princesses came out dressed for the Caledonian Ball.

Dr. Gunn drove us down the Clyde side where we saw 150 ships of the Home Fleet in the Clyde bank. There is an air of business and thrift in Scotland we didn't sense in England. The people are working and seem enthusiastic and happy. My week's ration gathered at Saltcoats consisted of ¼ lb. of sugar, 1 slice bacon, 1 egg, 1 small square of butter, 1 small square of margarine, 1 lb. of jam, a bit of cheese, and a small portion of meat. I'm sure most of us in Canada could consume it all in one day.

We flew by Trans-Canada Airlines. I am not an agent for T.C.A. but their excellent record for service and care makes flying the choice way of travel.

From Winnipeg to Montreal we flew on Twin Row Pratt and Whitney engines of 1150 H.P. There are two on each machine.

From Dorval Airport to Prestwick the North Star plane with 4 engines (Rolls Royce 620—similar to the Spitfire engines used in the war) of 1650 H.P. each, carried us across the Atlantic in 9 hours with an hour lay over in Goose Bay on the Labrador Coast.

These Trans-Atlantic planes travel about 320 m.p.h. at an altitude which varies with the winds from 5,000 to 10,000 feet. We carried 33 passengers. When these powerful planes took off we felt like Eric Knight's flying Yorkshireman—a sense of mastery over the air and a feeling that we could fly.

The flight was smooth and comfortable and the droning of the engines soon sank into the background. Hot dinner was served at midnight and the Steward and Stewardess on board brought us coffee and tended to personal wants. It was shocking after one hour or so to have the Steward show us how and where you'd find the "May West" and how to adjust it in case all four engines failed.

We returned with a feeling that in Canada we are most fortunate to have everything on which to build a happy future; that we would like to help the British and share what we have with them; that International Conferences are of much value in their personal contacts which lead to greater understanding.

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EDITORIAL


J. C. Hossack, M.D., C.M. (Man.), Editor

Letter to the Editor

September 6th, 1947.

Dr. J. C. Hossack,
Editor, Manitoba Medical Review,
44 Medical Arts Bldg.,
Winnipeg, Man.

Dear Doctor Hossack:

This should start a little controversy in our Manitoba Medical Review, our Journal that we are all very fond of, as it is second to none. A serious condition has arisen for Country Doctors in Manitoba, where there are no Hospitals or Nursing Homes, as their incomes have been reduced to less than that of a good mechanic and on par with school teachers, "due to two things." Hospitalization Insurance has killed the Maternity income and Health Units have taken the income from services on children and babies. These were always a source of good income to Country Doctors, probably the chief source to most, and if the Health Units can show better results or even as good results as was formerly shown by the family doctor who knows the people and who brought the children into the world, we would like to have it proved. In maternity or in children's work, the Country Doctor holds an unbeatable record for they are specialists in both.

The Government and the people have been colluding for a long time for more doctors to go to the country to practice, and then deprive them of their chief source of income, when they take up the challenge. How can they expect well-trained young doctors to leave large centres and go to the country? Another thing, and a good source of revenue for the Country Doctor, was to act as Health Officer. With the Health Units, these Health Officers are no longer needed.

Country Doctors are expected to be on duty 24 hours a day, to drive out in sub-zero weather and storms, to do all the dirty work, while others work in the day and get the cream. They are reduced to the level of the low income group and if something is not done to correct this, it won't be long until Country Doctors will be a thing of the past.

The only solution is for the Government and the people to establish small hospitals to keep maternity work at home, and let the Country Doctors do the work of the Health Units and Health Officers and let them have some of the large incomes taken from them by Health Units, and paid for by the people in taxes. Or the Country Doctor can be placed on salary sufficient to compensate him for the income that Legislation has deprived him of. Otherwise the Country

Doctor will be forced to move to Hospital Centres or take up other lines of business which pay reasonable incomes. There has been much short sightedness shown by those who formulated all these plans and I might say much selfishness, too.

There are many Country Doctors hard hit and we would like to hear from them.

ONE OF THEM.

Country Practice

The problem of how to get doctors to go to the country is still as acute, still as unsolved, as ever. It was natural that the plan urged by the Legislature should come to naught. Based as it was upon an interference with the liberty of the subject it could not have been supported in any court, and scarcely anyone who signed the agreement had any thought of having to implement it. The present solution, also, is likely to fail, especially in the matter of urging local graduates to become rural practitioners. Nor is it likely that graduates from other Canadian Universities will come forward to fill the gap. The Western provinces are no better off than we are, and the amenities of the Eastern provinces are such that there country practice is much more attractive than it is here. As for Great Britain it is not unlikely that the assurance of food, warmth and a minimum of interference will induce some to settle in Manitoba. Most fruitful source of new doctors is the Continent of Europe. The haunting memories of the concentration camp and the ominous shadow of things to come are likely to make a paradise of the dreariest and most unsettled northern outpost. But it is a question if every vacancy can thus be filled and a question, also, if it be desirable to have it so. The problem therefore remains and in its urgency demands a more satisfactory solution.

The fact is that our method of training students is the worst possible from the standpoint of filling rural practices. And how could it be otherwise? The students are taught by specialists, they serve under specialists. At Ward Rounds and Conferences it is to the specialist that questions are addressed and it is his opinion that carries weight. It is among specialists that the young man finds his ideal and finds also advisors to whom he turns when he thinks of planning his own career. Every aspect of medicine appears to be so compact, so compartmented, that he wonders if it can be possible to practice "good" medicine without laboratories, machines and rich clinical help instantly available. He looks upon the country bedside as a strange and almost foreign environment where he will be expected to do much with

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little and which can be reached, not by an elevator ride, but by long drives in the face of unkindly elements. He is deterred from thinking of country practice partly because he cannot see there the practice of "good" medicine and partly because to him the country is a terra incognita. He knows much about its hardships: he is ignorant of its charms and advantages. "Why," he says, "should I send myself into exile when I can enjoy the professional and cultural flesh-pots of the city?"

There is one way, and one way only, to fill rural practices, and that is by making them attractive. No one who has been taught "good" medicine will want to practice otherwise. Therefore it must be made possible for the rural doctor to practice the same sort of medicine as is practiced in the city. The plan must centre in the doctor, not in the patient. Its prime purpose should be to make it easy for the doctor to serve well, not merely to see that patients get better service. If the giving of better care means limiting the scope, restricting the work and, incidentally, reducing the income of the doctor, the plan will fail. Doctors now in the country, or at least some of them, find in the governmental and other agencies not assistants but competitors. Where the dearth is so great and the need is so great those already in rural practice must needs be fostered; not alone that they may prosper but that their prosperity may encourage others to follow them. Man has evolved a great way from amoeba proteus, yet both man and amoeba are alike in this,—they are governed by the desire to live and move in the most congenial environment.

It seems that it would be desirable to give a glimpse of rural practice to students before they graduate. One can see many advantages in a final year, part of which is spent in each of the two very diverse fields of practice—the hospital and the country. Knowledge gained in one field would supplement and complement knowledge gained in the other and the two together would make fuller, readier and more exact students. Indeed, if such rural opportunities were held forth as a prize to those who were competent in their studies and in their hospital duties, they would be sought and cherished. What anyone can have, no one wishes; but what few may obtain all men seek. I have other thoughts upon this matter, but they must wait.

Medical Director Wanted

The Manitoba Medical Service require the services of a qualified Medical Director. Applicant experienced in this class of work will be given preference. Apply, stating qualifications, experience and salary expected, to: Secretary, Manitoba Medical Service, 149 Portage Ave., Winnipeg, Manitoba.

ASSOCIATION PAGE

Reported by M. T. Macfarland, M.D.

Adjourned Annual Meeting — October 15th

The Annual Meeting is usually held in the fall. This year, however, the profession in Manitoba was host for the Annual Meeting of the Canadian Medical Association. It was realized that the many counter-attractions would diminish attendance at our own Annual Meeting, and prevent full consideration of several important items. Accordingly, discussion of matters concerning Manitoba Medical Service, Municipal Doctor Contract, other aspects of Medical Economics and College of Physicians and Surgeons was deferred until such time in the fall as a representative gathering and sufficient time might be ensured. By resolution of the Executive Committee, held on Sunday, September 14th, it was decided that the meeting should be held at 8 o'clock on the evening of October 15th, 1947, in the Tapestry Room of the Royal Alexandra Hotel. The highlight of the evening will be the Presidential Address. Everyone knows that Roy Martin could keep his listeners enthralled for an evening on the subject of Baseball, but he is likely to deal with certain aspects of the much discussed subject of providing adequate medical care for the rural areas of the province. "How Ya Gonna Keep 'Em Down on the Farm After They've Seen Patee" was a popular song after the First World War, and a similar question is now being asked concerning rural practitioners. It was the president himself who, in recent negotiations, said that, rather than have the prospective M.D. sign an undertaking to practice medicine for three years in Rural Manitoba, such an agreement should be signed by the prospective wife.

Remember the Date—October 15th.

Membership

On scanning the Membership List for the current year there are only fifty (50) members whose fees remain unpaid. Of that number, twenty-two (22) have a Winnipeg address, while twenty-eight (28) are residents in other parts of the province. Several of the total number have been paid-up members for a number of consecutive years, while others have contributed irregularly. Some have practised several years and are now retired, others are recent graduates. Many of those listed attended the meeting of the Canadian Medical Association in June and most are receiving regular copies of the Canadian Medical Association Journal and the Manitoba Medical Review. Some are participating members of the Manitoba Medical

Service, but it is understood that some cheques have been held in abeyance until the annual dues have been paid by the member. Now to the point of these remarks: The aim of the Association is 100% membership. May we count on YOU for your support?

Speakers, Scientific Programme — 79th Annual Meeting Canadian Medical Association

A recent communication from the Canadian Medical Association requested that in order that the Scientific Programme for the 79th Annual Meeting may be representative of the medical profession from all parts of Canada, each division submit a list of possible speakers. The Professors of Medicine, Surgery, Obstetrics and Gynaecology, and Pediatrics have been asked to submit the names of doctors who might present papers at the Toronto meeting in June, 1948. Should any member of the Association in the province have a paper which he would be prepared to present he should communicate the fact to one of the above mentioned—NOW!

Resignation of Treasurer

It was with regret that the resignation of Dr. H. M. Edmison as Treasurer of the Association was accepted. To the Treasurer usually goes the honor of Chairmanship of the Membership Committee and in his dual capacity, Mac performed trojan service. His former associates wish him well as he undertakes his new duties at Royal Jubilee Hospital, Victoria, B.C.

Clinical Luncheons

For many members of the profession residing outside Winnipeg, a trip to the city may not hold much attraction—especially during the fishing or hunting seasons—but there may be occasions when such a visit becomes a necessity. He may even have a few spare moments which must be occupied while he is here. In addition to the many non-professional attractions there are others which are available to all. Tumor Clinics are usually held at 9 o'clock each Wednesday morning at the Winnipeg General Hospital, and at 10 o'clock each Friday morning at St. Boniface Hospital. Ward Rounds at the Children's Hospital are held at 11 o'clock each Thursday morning. Practically all the hospitals hold Clinical Luncheons, which fall on regular days. Good food is provided, and the

price is moderate. The review of case records should have a tremendous effect in maintaining and raising the standard of professional work. The following general outline of luncheon dates may be of some assistance, but verification may be obtained by calling the hospital concerned:

- 1st Thursday, Winnipeg General Hospital.
- 2nd Tuesday, Misericordia Hospital.
- 2nd Thursday, St. Boniface Hospital.
- 2nd Friday, Victoria Hospital.
- 3rd Tuesday, Grace Hospital.
- 3rd Thursday, Winnipeg General Hospital.
- 4th Tuesday, St. Joseph's Hospital.
- 4th Thursday, St. Boniface Hospital.

Brandon and District Medical Society

Dr. Maxwell Bowman, Director, Preventive Medical Services Section, Department of Health and Public Welfare, attended the regular monthly meeting of staff of the Brandon General Hospital, September 10th, 1947, and dealt with the Differential Diagnosis of Acute Anterior Poliomyelitis and Encephalitis. Preliminary plans had been made for a meeting of Brandon and District Medical Society on that date, but revision was necessary. The new place and date of meeting have been set for NINETTE, OCTOBER 8th, 1947.

Winnipeg Medical Society

The regular meeting of the Council is held on the third Wednesday and the general meeting on the third Friday of the month. The 1947 Fall Session of the Winnipeg Medical Society was inaugurated on Friday evening, September 19th, under the direction of Dr. C. E. Corrigan, President. A most interesting Symposium on the "Virus Epidemics of 1947," was conducted by Dr. J. D. Adamson, Chairman, assisted by Drs. Max Bowman, J. L. Downey, Sam A. Boyd, Roper G. Cadham and J. C. Wilt. Drs. Bruce Chown, A. E. Deacon, and Mr. McClintoch joined the discussion. A social hour followed the meeting.

Southern District Medical Society

A meeting of the Southern District Medical Society was held in the Municipal Hall, Altona, at 2 p.m. on Thursday, September 11th, 1947.

Attending were: Doctors S. S. Toni, President, Altona; J. A. McNeill, Secretary-Treasurer, Gretna; L. Breidenbach, Altona; J. S. Holowin, Morris; C. J. W. Dick, Dominion City; H. McGavin, Plum Coulee; A. P. Warkentin and C. W. Wiebe, Winkler; A. F. Menzies and W. M. Colert, Morden; C. L. Blight, Miami; E. K. Cunningham, Carman; J. C. Elias, Elm Creek; A. B. Houston and M. T. Macfarland, Winnipeg; Mr. J. Menzies, Morden.

1. At the business session Dr. J. C. Elias expressed concern in connection with certain aspects of the administration of the Manitoba Health

Services Act. A resolution was to be drawn to bring the matter again to the attention of the parent body, also to the other District Medical Societies.

2. Dr. M. T. Macfarland, Executive Secretary of the Manitoba Medical Association, discussed recent events in connection with the Executive and Annual Meetings of the Association, also the Canadian Medical Association Annual Meeting.

3. Dr. A. B. Houston, of Winnipeg, gave a paper on Tachycardia, which was followed by considerable discussion. A motion picture film on Cancer of the Breast was shown through the courtesy of Ingram and Bell, and the National Film Board.

4. The President and Secretary were hosts to the members of the Association and visitors, at a dinner at the Altona Hotel.

5. The next meeting of the Society will be held at Morden on the first or second Thursday of December.

Northwest Medical Society

A meeting of Northwest Medical Society was held in the Sacred Heart Hospital, Russell, Manitoba, on September 10th, 1947, at 3 p.m.

Attending were: Doctors T. I. Brownlee, President, Russell; J. E. Hudson, Secretary-Treasurer, Hamiota; T. W. Shaw, Russell; D. Braunstein, Binscarth; W. J. Sharman, Angusville; H. L. Edwards, Birtle; A. D. Maclean, Elkhorn; R. S. Harris, Virden; E. D. Hudson, Hamiota; J. N. Andrew and H. C. Stevenson, Minnedosa; R. K. Chalmers, Miniota; A. W. Hicks, Roblin; A. A. Toms, Tisdale; B. D. Best, M. B. Perrin, and M. T. Macfarland, Winnipeg.

1. Dr. M. T. Macfarland, Executive Secretary of the Manitoba Medical Association, outlined several matters which had been dealt with at Executive and Annual Meetings of the Association, and also at the Annual Meeting of the Canadian Medical Association. Tea was served through the courtesy of Sister Julian.

2. Dr. M. B. Perrin spoke on the Surgical Treatment of Duodenal Ulcer, with special reference to Vagotomy. The paper was illustrated by numerous lantern slides.

3. Dr. B. D. Best spoke on the Diagnosis and Management of Inertia and demonstrated the use of the Kielland Forcep.

4. The business and scientific session ended, the doctors and their ladies sat down to dinner, which was served in the basement of the United Church. After several short speeches and a vote of thanks to the host and the visiting speakers, the session ended.

5. Tentative plans were made for a meeting of the Society to be held in Birtle on Wednesday, October 22nd, 1947.

SOCIAL NEWS

Reported by K. Borthwick-Leslie, M.D.

We apologize to Dr. F. G. McGuinness for the belated congratulations on his being elected a Fellow of the Royal College of Obstetricians and Gynaecologists of London. Dr. McGuinness is the first Winnipeg doctor to receive such an honor. Dr. McGuinness recently returned from the West Coast, having started his "Presidential Tour," and will leave shortly for similar visits in all points East.

Dr. Manly Finkelstein, recently made a member of the American Academy of Allergy, is returning to Winnipeg in September after five years' post-graduate work in the Roosevelt, Mount Sinai, and Beth Israel Hospitals in New York. He will be associated with the Mall Clinic group of doctors.

The marriage in Montreal of our Manitoba-born author of the best selling novel, "The Tin Flute," Gabrielle Roy, to Dr. Marcel Carbotte, of St. Boniface, is announced. Dr. and Mrs. Carbotte will sail for Europe, where the doctor is doing post-graduate work in Medicine.

Dr. and Mrs. Alex. Swan entertained the members of the Swan-Phillips wedding party at dinner at the Fort Garry Hotel, following the wedding rehearsal. George, the only son of Dr. and Mrs. Swan, was married to Louise, daughter of Hugh Phillips, K.C., and Mrs. Phillips, at Holy Trinity Church, on September 5th, 1947.

This may be out of my sphere but my heartiest congratulations to the five women graduates in Radiography and Technology, to whom Dr. Sanger McEwen and Dr. James Prendergast, of St. Boniface Hospital, presented their diplomas. I, personally, know from the C.W.A.C.'s some of these girls, and sincerely appreciate the success of their rehabilitation studies.

Dr. and Mrs. L. P. Gendreau, of Selkirk, were entertained at the home of Dr. and Mrs. Edward Johnson, Selkirk, prior to their departure for Ottawa, where Dr. Gendreau will assume his new duties as Deputy Commissioner of Penitentiaries.

Dr. and Mrs. I. Miller and children, left, recently, for London, England, where Dr. Miller will continue his post-graduate studies in Internal Medicine after one and a half years' interning in St. Boniface Hospital.

Col. and Mrs. Percy G. Bell have returned from Vancouver, where they attended the wedding of their daughter, Laurel Joan, to Dr. Thos. Richard Osler.

Dr. and Mrs. S. C. Moske, formerly Miss Dolly Winkler, have returned to St. Paul, Minnesota, after a short holiday in Winnipeg.

Dr. and Mrs. C. W. Duncan and daughter have returned from a very enjoyable vacation in Eastern Canada.

Congratulations to Dr. and Mrs. L. R. Coke on the birth of a son, August 30th, 1947, and Dr. and Mrs. A. W. Natsuk, on the birth of their daughter, Barbara Rose, August 24th, 1947, and Dr. and Mrs. J. A. McNeill (nee Patricia McAllister), of Gretna, on the birth of a son, James Bernard, August 24th, 1947, and to Dr. and Mrs. R. F. Meyers, on the birth of a son, September 11th, 1947, at Brandon General Hospital, and to Dr. and Mrs. J. A. Findlay, a son on September 14th, at Brandon General Hospital.

Dr. J. A. McTavish announces the engagement of his eldest daughter, Mary Gwendolyn, to Mr. W. D. MacDonald. The wedding will take place on October 10th, 1947, at St. John's Presbyterian Church.

Of interest to the Medical Profession is the marriage of Beatrice Joyce Herbert, daughter of the late Doctor and Mrs. S. G. Herbert, to Stefan August Bjarnson, of Toronto, in St. Andrew's United Church, September 13th. The bride, a graduate of the University of Manitoba, 1947, and the bridegroom, B.A., University of Manitoba, after a wedding trip to Chicago and points South, will make their home in Toronto, where Mr. Bjarnson is completing his training in Law at Osgoode Hall.

The wedding of Helen Violet Sinclair, Calcutta, India, to Dr. A. H. Hall, Gold Coast, British West Africa, took place September 3rd, in Trinity Baptist Church, Winnipeg. Dr. and Mrs. Hall will leave shortly for their residence in British West Africa.

In sincere regret at the departure of Dr. W. R. Lynn Gunn, from Deer Lodge Hospital, the D.V.A. Staff paid tribute by presentation and farewell afternoon entertainment. Good luck, Lynn, in your future responsibilities.

Dr. Saul Kobrinsky has recently returned from St. Louis, Missouri, where he has been attending a Medical Convention.

Dr. and Mrs. A. A. Toms, of Tisdale, Saskatchewan, and son, having visited Mr. and Mrs. F. A. Toms in Winnipeg, will spend a short holiday with Mrs. L. Grant, Minnedosa.

Dr. and Mrs. W. H. G. Gibbs, Selkirk, have returned from a two-month vacation on the West Coast, visiting friends and relatives in Vancouver, Seattle, and Turner Valley, Alberta.

Dr. J. T. Cruise left, last week, to take up permanent residence in Kelowna, B.C., in the Okanagan Valley. Good luck, Johnny, we will miss you here.

We extend our sympathy to the relatives of: Dr. Robert Whittaker, of Yorkton, Saskatchewan, graduate Manitoba Medical College, 1928; Dr. Geo. Wesley Leech, Lethbridge, Alberta, formerly of Brandon; Mrs. Mary Ann Waldie, Widow of Dr. Robert Waldie.

Birthday congratulations to Dr. Frank Sedziak, Elie, Manitoba, born in Poland, 1877.

Dr. and Mrs. James Whiteford (nee Betty Thompson) are receiving congratulations on the birth of their son, David Neil.

The "Dr. B. J. Brandson Memorial Plaque" unveiled at Gimli, Manitoba, last month refreshes our memories of one of our most beloved doctors. It is gratifying to know that the public appreciates the unselfish devotion to humanity of men like Dr. Brandson.

We extend our sincere sympathy to the bereaved family and friends of Dr. H. W. Riley. His sudden death has been a shock to all his friends and confreres.

Dr. Ellen Taylor, was hostess to the Executive of the Manitoba Branch of Medical Women at dinner early in the month. We were thoroughly interested in and entertained by Dr. Anna Wilson's report, purely informal, of her overseas trip. More anon from our delegates.



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Crown Brand and Lily White Corn Syrups are well known to the medical profession as a thoroughly safe and satisfactory carbohydrate for use as a milk modifier in the bottle feeding of infants.

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Department of Health and Public Welfare

Comparisons Communicable Diseases — Manitoba (Whites and Indians)

DISEASES	1947		1946		TOTALS	
	July 13 to Aug. 9, '47	June 15 to July 12, '47	July 14 to Aug. 10, '46	June 16 to July 13, '46	Dec. 30, '46 to Aug. 9, '47	Dec. 30, '45 to Aug. 10, '46
Anterior Poliomyelitis	111	2	6	1	113	8
Chickenpox	74	174	55	146	829	857
Diphtheria	2	3	9	11	59	120
Diphtheria Carriers	0	2	2	2	16	113
Dysentery—Amoebic	0	0	0	0	0	1
Dysentery—Bacillary	3	1	0	0	5	1
Erysipelas	1	4	4	3	27	50
Encephalitis	2	0	0	1	4	1
Influenza	21	3	8	5	105	171
Measles	195	315	244	316	6445	1591
Measles—German	0	0	5	4	32	21
Meningococcal Meningitis	1	1	2	2	9	11
Mumps	43	42	72	136	1167	1824
Ophthalmia Neonatorum	1	0	0	0	1	0
Pneumonia—Lobar	10	16	10	7	142	126
Puerperal Fever	0	0	1	0	2	2
Scarlet Fever	6	12	18	56	136	415
Septic Sore Throat	0	3	4	3	13	27
Smallpox	0	0	0	0	0	0
Tetanus	2	1	0	0	3	1
Trachoma	0	0	1	0	2	2
Tuberculosis	234	109	74	55	723	570
Typhoid Fever	1	2	3	1	4	14
Typhoid Paratyphoid	0	0	0	1	0	2
Typhoid Carriers	0	0	0	0	1	2
Undulant Fever	0	1	3	2	5	18
Whooping Cough	102	42	32	24	748	222
Gonorrhoea	147	151	180	199	1126	1494
Syphilis	49	55	40	48	379	418
Diarrhoea and Enteritis, under 1 yr.	18	14	26	37	99	133

Four-Week Period Report, July 13th to August 9th, 1947

DISEASES	*718,699 Manitoba	*906,000 Saskatchewan	*3,825,000 Ontario	*2,962,000 Minnesota
(White Cases Only)				
*Approximate population.				
Anterior Poliomyelitis	111	49	47	43
Chickenpox	74	80	500	---
Diarrhoea & Enteritis (under 1 yr.)	18	4	---	---
Diphtheria	2	0	9	22
Diphtheria Carriers	0	0	0	5
Dysentery — Amoebic	0	0	0	7
— Bacillary	3	0	0	1
Erysipelas	1	3	2	0
Infectious Jaundice	0	0	2	0
Influenza	21	0	14	1
Malaria	0	1	0	25
Measles	195	44	271	260
Measles, German	0	3	28	0
Meningococcal Meningitis	1	0	5	4
Mumps	43	36	764	0
Pneumonia, Lobar	10	---	---	---
Scarlet Fever	6	2	89	47
Septic Sore Throat	0	0	4	0
Tuberculosis	234	49	98	218
Tularemia	0	0	1	0
Typhoid Fever	1	2	1	0
Typh. para-Typhoid	0	0	0	2
Undulant Fever	0	0	7	29
Whooping Cough	102	13	209	337
Gonorrhoea	147	---	373	---
Syphilis	49	---	279	---

DEATHS FROM COMMUNICABLE DISEASES

For 4-Week Period July 15th to August 12th, 1947

Urban — Cancer, 51; Influenza, 1; Pneumonia Lobar (108), (107), (109), 4; Pneumonia (other forms), 4; Poliomyelitis, 2; Syphilis, 2; Tuberculosis, 6; Whooping Cough, 1; Diarrhoea and Enteritis (under 1 year), 1; Dysentery, 1; Tetanus, 1; Chicken Pox, 1. Other deaths under 1 year, 36. Other deaths over 1 year, 180. Stillbirths, 18. Total, 234.

Rural — Cancer, 24; Influenza, 2; Pneumonia Lobar (108), (107), (109), 3; Pneumonia (other forms), 7; Syphilis, 1; Tuberculosis, 13; Whooping Cough, 1; Diarrhoea and Enteritis (under 1 year), 6; Diseases of Pharynx and tonsils, 1. Other deaths under 1 year, 24. Other deaths over 1 year, 160. Stillbirths, 11. Total, 195.

Indians — Influenza, 13; Pneumonia (other forms), 1; Tuberculosis, 1; Dysentery, 1. Other deaths under 1 year, 0. Other deaths over 1 year, 2. Stillbirths, 0. Total, 2.

Poliomyelitis cases increased in number to 500 for Manitoba to date of writing (September 12th). Of these four have died. The epidemic is even now on the wane.

Encephalitis Epidemica — At the same date we have had 50 cases of encephalitis reported—two proven by blood test to be of the Western Equine type. Fifty-two of the poliomyelitis cases reported are over the age of 30 years and nine are under one year. As poliomyelitis is rare in these very young and old age groups, many of them may finally be diagnosed as encephalitis. From every case or suspect case of encephalitis we would appreciate a twenty c.c. specimen of blood for complement fixation test. This will be of considerable help in final diagnosis.

WHOOPING COUGH DIPHTHERIA TETANUS

PERTUSSIS VACCINE (For Prevention of Whooping Cough)

A modification in the concentration of pertussis vaccine has recently been made by the Connaught Medical Research Laboratories, so that the vaccine formerly containing 15,000 million killed organisms (*H. pertussis* from strains in Phase 1) per cc. now contains approximately 22,500 million killed organisms per cc., permitting the administration of three doses of 1 cc. at monthly intervals, and a reinforcing dose of 1 cc. after an interval of at least three months.

DIPHTHERIA TOXOID AND PERTUSSIS VACCINE (Combined)

Diphtheria toxoid has been combined with the new concentration of whooping cough vaccine. The new combined product is also administered in three doses of 1 cc., with a reinforcing dose of 1 cc.

DIPHTHERIA TOXOID, PERTUSSIS VACCINE & TETANUS TOXOID (Combined)

For protection against tetanus as well, a triple antigen has been introduced by the Laboratories. This product contains diphtheria and tetanus toxoids combined with the new concentration of whooping cough vaccine and is administered in three doses of 1 cc., followed by a reinforcing dose of 1 cc.

ADVANTAGES

Two important advantages have been made possible by this change:—

A dose of 1 cc. replaces the dose of 2 cc. as formerly employed.

The reinforcing dose is included in each package.

HOW SUPPLIED

For the inoculation of one child—Package containing Four 1-cc Ampoules.
For a group of nine children—Package containing Six 6-cc. Ampoules.

CONNAUGHT MEDICAL RESEARCH LABORATORIES

University of Toronto

Toronto 4, Canada

Depot for Manitoba

BRATHWAITES LIMITED

431 Portage Avenue, Winnipeg